

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

424.8
G47

VOL. XVIII. NO. 14.

JULY 15, 1890.

LIBRARY

CURRENT SERIALS RECORD

AUG 26 1894

U.S. DEPARTMENT OF AGRICULTURE

PEACE ON EARTH
GOOD WILL TOWARD MEN



GLEANNING
IN

BEE CULTURE

W Conrad

DEVOTED
TO

& HOME INTERESTS.

MEDINA OHIO
BY
A. ROOT

TERMS, ONE DOLLAR PER YEAR.

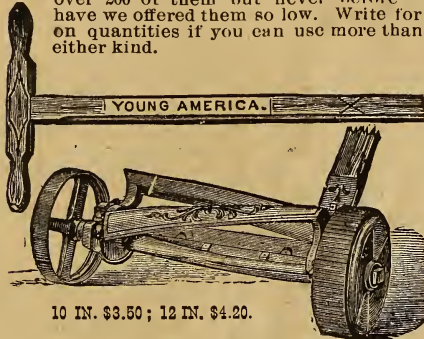
ENTERED AT THE POSTOFFICE, MEDINA, OHIO, AS SECOND-CLASS MATTER.

GLEANINGS IN BEE CULTURE.

YOUNG AMERICA

LAWN MOWER.

The cheapest machine offered anywhere. Many prefer them to one with two drive wheels because they run so easily, and are so light. They are just right for running among the hives. For the ladies who appreciate outdoor exercise you could have nothing better than a 10-inch Young America lawn-mower to keep the grass down on the lawn. We have sold over 200 of them but never before have we offered them so low. Write for prices on quantities if you can use more than one of either kind.



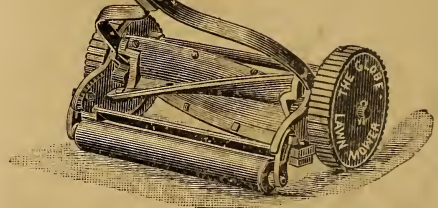
10 IN. \$3.50; 12 IN. \$4.20.

THE GLOBE LAWN-MOWER.

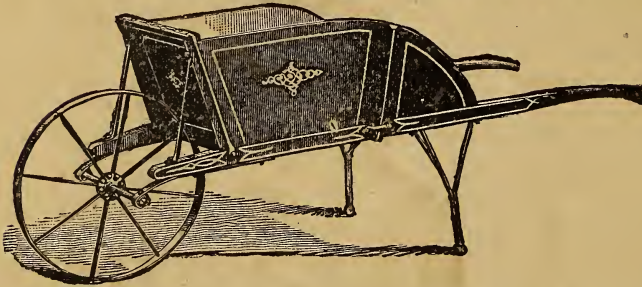
Guaranteed a First-Class Machine. The Globe lawn-mower shown in cut combines all the best features, and is a first-class mower in every respect. Having only three knives it will cut longer grass than those having four. The axle of the drive-wheel does not project, so that you can run close to the hive. It has two drive-wheels and roller, and the driving gears are simply perfect. The prices are very much lower than on any other first-class mower.

TABLE OF PRICES:

	LIST	OUR
	PRICE	PRICE
10 in. Globe....	(\$13.00)...	\$4.55
12 " "	(15.00)....	5.25
14 " "	(17.00)....	5.95
16 " "	(19.00)....	6.65
18 " "	(21.00)....	7.35



OUR DAISY WHEELBARROW.

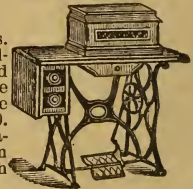


Who has not felt the need of a **Light, Strong, and Durable**, and at the same time **Cheap** wheelbarrow? The cut shows one that combines all these qualities better than any other we have ever seen. We have two sizes—the smaller one weighing only 35 lbs., and yet it will carry 500 lbs. safely, and it can be packed so closely together for shipment that you can take the whole thing under your arm and walk off easily. The wheel has flat spokes instead of round. The legs are steel, so they will neither break nor bend, even if you bump them on the sidewalk.

The springs are oil-tempered with adjustable bearings, so the wheel will always run free. More than all, the wheelbarrows are the nicest job of painting and varnishing, I believe, I ever saw, for a farm implement. They are handsome enough to go around town with, and strong enough to do heavy work; and yet the price of the small size No. 3 is only \$1.00; the larger size No. 2 is \$4.25. Over 200 sold in 8 months.

SINGER SEWING-MACHINE, \$11 TO \$16.

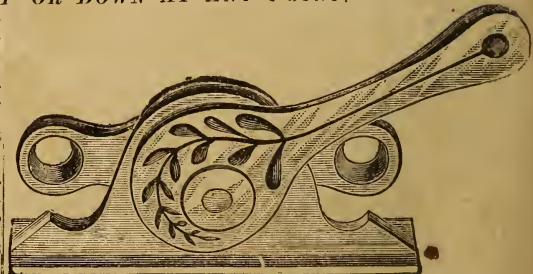
Made from latest models; first class in every respect, and warranted for 5 years. A boon to many an overworked housewife who can not afford to pay the price usually asked by agents. Cut shows No. 3. No. 1 is the same without the cover, leaf, and two drawers. Price \$11.00. No. 2 has a cover, but no leaf or side drawers. Price \$12.50. No. 3, as shown in the cut, price \$14.00. No. 4, same as No. 3, with 2 more drawers to the right. Price \$15.00. No. 5 has 3 drawers on each side. Price \$16.00. Wood parts are oil polished, walnut; balance-wheel is nickel plated, and each machine includes a full set of attachments, with instructions for use. We ship them direct to customers from factory in Chicago. We have a catalogue giving cut of each machine and full description which we shall be pleased to mail on application.



BUCKEYE SASH-LOCK.

A DEVICE TO FASTEN WINDOWS UP OR DOWN AT ANY POINT.

For many years I have been trying to get something better to hold a window up than a stick or book, or something of that sort; but although we have tried them, even paying as high as 75 cts. per window, I have never had anything please me so well as the one here shown. This device holds the sash securely by friction in any desired position, as tight as if it were in a vise. It prevents the sash from rattling, and excludes the dust by making tight joints, and yet it does not mar the wood. It is put on with two screws, and can be fitted by an inexperienced hand in three minutes. It works equally well on upper or lower sash, with or without weights. Printed instructions are furnished with each one, as well as screws to fasten them on with, and yet the price is only 5 cts.; 1 doz. for 50 cts.; 100 for \$4.00. If wanted by mail, add 3 cts. each extra. The above are japanned.



A. I. ROOT. Medina, Ohio.



In responding to this advertisement mention GLEANINGS.

TESTED QUEENS CHEAP

During the Swarming Season.

Prolific queens, producing all three-banded workers, \$1.00 each. Six for \$4.00.

13-14d **J. A. GREEN, Dayton, Ill.**

In responding to this advertisement mention GLEANINGS.

HOME EMPLOYMENT.—AGENTS wanted everywhere, for the HOME JOURNAL—a grand family paper at \$1 a year. *Big cash premiums.* Sample FREE. **THOS. G. NEWMAN & SON,** 246 East Madison Street, CHICAGO, ILLS.

In responding to this advertisement mention GLEANINGS.

SECTIONS! SECTIONS! SECTIONS!

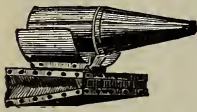
On and after Feb. 1, 1890, we will sell our No. 1 V-groove sections, in lots of 500, as follows: Less than 2000, \$3.50 per 1000; 2000 to 5000, \$3.00 per 1000. Write for special prices on larger quantities. No. 2 sections at \$2.00 per 100. Send for price list on hives, foundation, cases, etc.

J. STAUFFER & SONS,
Successors to B. J. Miller & Co.,
Nappanee, Ind.

16 tfdb

In responding to this advertisement mention GLEANINGS.

BEST ON EARTH



ELEVEN YEARS
WITHOUT A
PARALLEL, AND
THE STAND-
ARD IN EVERY
CIVILIZED
COUNTRY.



Bingham & Hetherington
Patent Uncapping-Knife,
Standard Size.

Bingham's Patent Smokers,

Six Sizes and Prices.

Doctor Smoker,	3 1/2 in.,	postpaid	...\$2.00
Conqueror "	3 "	"	... 1.75
Large "	2 1/2 "	"	... 1.50
Extra (wide shield)	2 "	"	... 1.25
Plain (narrow "	2 "	"	... 1.00
Little Wonder,	1 1/2 "	"65
Uncapping Knife.....			1.15

Sent promptly on receipt of price. To sell again, send for dozen and half-dozen rates.

Milledgeville, Ill., March 8, 1890.

SIRS:—Smokers received to-day, and count correctly. Am ready for orders. If others feel as I do your trade will boom. Truly, **F. A. SNELL.**

Vermillion, S. Dak., Feb. 17, 1890.

SIRS:—I consider your smokers the best made for any purpose. I have had 15 years' experience with 300 or 400 swarms of bees, and know whereof I speak. Very truly, **R. A. MORGAN.**

Sarabsville, Ohio, March 12, 1890.

SIRS:—The smoker I have has done good service since 1883. Yours truly, **DANIEL BROTHERS.**

Send for descriptive circular and testimonials to
11tfdb **BINGHAM & HETHERINGTON, Abnoria, Mich.**

In responding to this advertisement mention GLEANINGS.

DADANT'S FOUNDATION

Is kept for sale by Messrs. T. G. Newman & Son, Chicago, Ill.; C. F. Muth, Cincinnati, O.; Jas. Heddon, Dowagiac, Mich.; O. G. Collier, Fairbury, Nebraska; G. L. Tinker, New Philadelphia, Ohio; E. S. Armstrong, Jerseyville, Ill.; E. Kretzmer, Red Oak, Iowa; P. L. Viallon, Bayou Goula, La.; Jos. Nysewander, Des Moines, Ia.; C. H. Green, Waukesha, Wis.; G. B. Lewis & Co., Watertown, Wisconsin; J. Mattoon, Atwater, Ohio, Oliver Foster, Mt. Vernon, Iowa; C. Hertel, Freeburg, Illinois; Geo. E. Hilton, Fremont, Mich.; J. M. Clark & Co., 1517 Blake St., Denver, Colo.; Goodell & Woodworth Mfg. Co., Rock Falls, Ill.; **E. L. GOOLD & CO., Brantford, Ont., Can.**; R. H. Schmidt & Co., New London, Wis.; J. Stauffer & Sons, Nappanee, Ind.; Berlin Fruit-Box Co., Berlin Heights, O.; E. R. Newcomb, Pleasant Valley, N. Y.; L. Hanssen, Davenport, Ia.; C. Theilman, Theilmanton, Minn.; G. K. Hubbard, Fort Wayne, Ind.; T. H. Strickler, Solomon City, Kan.; E. C. Eaglesfield, Berlin, Wis.; Walter S. Pouder, Indianapolis, Ind., and numerous other dealers.

LANGSTROTH on the HONEY-BEE, REVISED.

The Book for Beginners, the Most Complete Text-Book on the Subject in the English Language.

Bee-veils of Imported Material, Smokers, Sections, Etc.

Circular with advice to beginners, samples of foundation, etc., free. Send your address on a postal to
CHAS. DADANT & SON,
HAMILTON, HANCOCK CO., ILLINOIS.

In responding to this advertisement mention GLEANINGS.

SECTIONS.

\$2.50 to \$3.50 per M. Bee-Hives and Fixtures cheap. **NOVELTY CO.,**

6tfdb

Rock Falls, Illinois.

Please mention this paper.

ONE-PIECE SECTIONS

A SPECIALTY.

A. I. Root's style, \$3.00 per 1000. Address

10tfdb

B. WALKER & CO., Capac, Mich.,
or Wauzeka, Wis.

In responding to this advertisement mention GLEANINGS.

BRIGHTEST

GOLDEN ITALIAN BEES AND QUEENS,

—AND THE—

REDDEST DRONES IN THE WORLD.

Untested, \$1.00 | Tested, \$2.00 | Select tested, \$3.00
Special breeding, guaranteed to please, \$5.00.

L. L. HEARN, FRENCHVILLE, - - W. VA.
11tfdb Please mention this paper.

SPECIAL CROPS.

A magazine for advanced agriculturists; 25 cts. per year; sample 7 cts. Also, Black Minorcas, B. Leghorns, and S. Wyandottes; eggs of either, per setting, 75 cts.; 26 at one time, \$1.00. 4-50d

C. M. GOODSPEED, Skaneateles, N. Y.

In responding to this advertisement mention G.

IF YOU ARE IN WANT OF

BEES or BEE-KEEPERS' SUPPLIES,

Send for our New Catalogue.

9tfdb

OLIVER HOOVER & CO.,

Mention this paper.

Snydertown, Pa.

✕ IMPORTED . CARNIOLANS. ✕

We have just received a very fine lot of select imported Carniolan queens. Price \$4.00 each, and guaranteed to arrive at your P. O. in good condition. We also have a very fine lot of home-bred Carniolan queens that are ready to ship by return mail. With us 90 per cent have proven to be purely mated. Some parties have condemned the Carniolans, but we are safe in saying that they have never had any pure Carniolans; so the pure Carniolans did not get justice. See what A. I. Root says in GLEANINGS, July 1st, regarding pure Carniolans. Give them a fair trial, and you will find that they have qualities superior to any other race of bees. One untested queen, \$1.00; six, \$4.50; twelve, \$8.00. For further particulars write for free circular and and price list to

F. A. LOCKHART & CO., Pattens Mills, N. Y.

LOOK! Italian Queens, 20 to 75c

Tested, 75c; untested, 45; mismated, 20c. My queens are as good as any in every particular. I am requeening one of my apiaries to five-banded golden Italians. Safely delivered by F. C. MORROW, Wallaceburg, Ark.

ITALIAN QUEENS FOR SALE.

Tested, reared in August, 1889, 75 cts., clipped; untested, 65 cts.; hybrids, 25 cts.

G. L. JONES, Grand Ridge, Illinois.

PURE ITALIAN QUEENS.

Tested queens, \$1.00 each; untested queens, 70c each; 3 for \$2.00. All queens bred from select imported and home-bred queens. Safe arrival guaranteed.

D. G. EDMISTON,
Adrian, Lenawee Co., Mich.

BEES

16tfdb

SEND for a free sample copy of the BEE JOURNAL — 16-page Weekly at \$1 a year—the oldest, largest, and cheapest Weekly bee-paper. Address BEE JOURNAL, Chicago, Ill. Please mention this paper.

Black and Hybrid Queens For Sale.

For the benefit of friends who have black or hybrid queens which they want to dispose of, we will insert notices free of charge, as below. We do this because there is hardly value enough to these queens to pay for buying them up and keeping them in stock; and yet it is oftentimes quite an accommodation to those who can not afford higher-priced ones.

Having a few colonies of hybrids to Italianize, we offer for sale 12 or 14 mismated queens for 50c each until sold. Some of the queens produce almost three-banded bees, and their progeny are almost pure Italians. T. L. THOMPSON, Blairsville, Pa.

FOR SALE.—25 nice, large, laying hybrid queens at 25c each. Send at once if you want nice ones.

F. H. PETTS, Warsaw, Mo.

We have about 70 Carniolan queens (in an out-apiary) that have mated with Italian drones. We offer them at the following prices: 50c each, or \$5.00 per doz. The above queens are large and prolific, and are only one year old. Reason for selling above queens is, we are going to change to all pure Carniolans.

F. A. LOCKHART & Co.,
Pattens Mills, N. Y.

A few young hybrid queens for sale at 30c each, buyer to send provisioned cage.

JOHN GINTER, Pleasant Home, Ohio.

Hybrid queens wanted, but do not send them until you write to and hear from

O. R. COE, Windham, Greene Co., N. Y.

Hybrid queens, 30c; mismated Italian queens, 40c; all young, and very prolific.

B. DAVIDSON, Uxbridge, Ontario, Can.

Mismated Italian queens for sale at 25c each.

MRS. A. A. SIMPSON, Swarts, Greene Co., Pa.

Mismated queens, 20c each. No more 10c hybrids.

F. C. MORROW, Wallaceburg, Ark.

Ten very fine hybrid queens for sale at 25c each; 5 for \$1.00.

G. L. JONES, Grand Ridge, Ill.

1890

FINE ITALIAN QUEENS, FROM bees for business; untested, each 75 cts.; six, \$4.00. Order now, pay when queens arrive. 13-16db W. H. LAWS, Lavaca, Ark.

CHENANGO VALLEY APIARY

Fills orders now, and sends out by return mail, Beautiful Yellow Italian Queens. Untested, \$1.00. Tested, \$1.25. Send for circular.

MRS. OLIVER COLE, Sherburne, Chenango Co., N. Y.

In responding to this advertisement mention GLEANINGS.

GOLDEN ITALIANS.

Warranted to produce 3 banded workers, and safe arrival guaranteed. I can fill all orders for less than one dozen by return mail if desired, price 75c each. Look at my ad. in June Nos. of GLEANINGS. Address JAMES WOOD, North Prescott, Mass. 11tfdb

In responding to this advertisement mention GLEANINGS.

FOR SALE. My supply business, shop building, and tools, with 70 colonies of bees. Want to sell at once. Low price and easy terms. Must be disposed of before Dec. 1st, 1890. Address 14-15-16d JAS. A. NELSON, Muncie, Wy. Co., Kan.

In responding to this advertisement mention GLEANINGS.

LOOK! Tested Italian queens, \$1.25 each; untested, 80 cts.

MRS. A. M. KNEELAND (nee Taylor),
Box 77. Mulberry Grove, Bond Co., Ill.

EVERBEARING STRAWBERRY. Descriptive price list free. SETH WINQUIST, Russellville, Oregon.

Sturwold's Show-Case

FOR THE PROTECTION AND DISPLAY OF HONEY.

This case is 24 feet high and 20 in. square, outside measure, top and bottom. The glass of which it is made is 16x26. The case is to be set up in any grocery, drug-store, or any other place of business where you wish your honey exhibited or sold. These show-cases are shipped from here. Price \$4.00. With your name and address, \$4.50. As the glass is very apt to be broken in transit we will ship them with the glass boxed separately at same price, if you prefer. As the cases are put together with glue we can not sell them in the flat.



A. I. ROOT, Medina, O.

Contents of this Number.

ABC Scholar's Experience.....	521	Honey, To Improve.....	528
Alley's Drone trap.....	532	Hybrids and Propolis.....	532
Aphis, Blue and Green.....	525	Labels, To Stick to Tin.....	527
Apiary, plan for.....	524	Miller's Proposed Apiary.....	524
Bees Assessable.....	531	Perf'd Zinc Not a Failure.....	529
Black Bees, Gentle.....	520	Poison Honey and Bees.....	529
Carniolans, Favorable to.....	533	Queen, Fertile, Flying Out.....	530
Chaff Hive, Wider Entrance.....	529	Queens Stopping Laying.....	530
Coe's Swarming Arrang'm't.....	529	Queens Failing to Hatch.....	531
Commission, Selling on.....	515, 516	Queen c's, Damaged, How?.....	519
Covers, Hive.....	526	Sections, Weight v. Piece.....	528
Diamond Rattlesnake.....	517	Sections, Starting Bees in.....	517
Double-walled Simplicity.....	518	Selling on Commission.....	515, 516
Dovetailed Hive.....	519	Shade for Hives or Not.....	525
Editors and Questions.....	518	Spacing Brood-frames.....	516
Foundation, Heavy, Best.....	532	Stinging, Fatal.....	528
Gardening in July.....	533	Strawberries, Terry's.....	523
Gift of Spirit.....	536	Thick Top-bar, Failure.....	529
Hellgrammite.....	516	Thick Top-bar 's in Our Apiary.....	532
Hermaphrodite, Another.....	518	Thick Top-bar.....	518
Hoffman Frame, Our Ap'y.....	532	Width of Top-bars.....	(Q. B.) 527
Home of T. B. Terry.....	522		

HONEY COLUMN.

CITY MARKETS.

COLUMBUS.—*Honey.*—Honey scarce, and selling at 17¢ for choice white clover. Twelve or fifteen hundred pounds would meet with ready sale.

July 8. EARLE CLICKENGER, Columbus, O.

CHICAGO.—*Honey.*—Market is bare of honey of all kinds, both comb and extracted. New comb will bring 13¢. A little fancy has been sold at 15¢. Extracted from 6@8. Weather warm but there is some demand, and consignments would sell.

July 8. R. A. BURNETT,
161 So. Water St., Chicago, Ill.

NEW YORK.—*Honey.*—New Southern strained arriving freely. Quality poor, and prices declining. We quote from 60@65¢ per gallon. New extracted, orange blossom, 7@7½. New California, white sage, 6@6½. California light amber, 5½@5½.

Beeswax.—Scarce and firm at 29@30.
July 7. HILDKRETH BROS. & SEGELKEN,
28 & 30 West Broadway, New York.

CINCINNATI.—*Honey.*—Demand is good for new crop extracted and comb honey. Judging by present arrivals, there has been a good crop harvested. Extracted honey brings 8@8¢ on arrival. Comb honey 12@15 in the jobbing way, for best white.

Beeswax.—There is a good home demand at 24@26¢ on arrival.

July 9. CHAS. F. MUTH & SON,
Cincinnati, O.

DETROIT.—*Honey.*—No new honey in the market, and no desirable old left; it is quoted at 10@13¢. Extracted, 7@8¢.—*Beeswax* wanted at 27@28¢.

Bell Branch, Mich., July 8. M. H. HUNT.

ST. LOUIS.—*Honey.*—Trade quiet at unchanged prices.

July 9. D. G. TUTT GROCER CO.,
St. Louis, Mo.

NEW YORK.—*Honey.*—Market is unsettled, it being now between seasons. We quote common Southern, strained, at 60@65¢ per gal. New California extracted, 6@6½¢ per lb.; new Cal. comb, 11@12. *Beeswax*, scarce, 27@28.

July 9. F. G. STROHMEYER & Co.,
New York.

BOSTON.—*Honey.*—No change in honey or beeswax.

July 9. BLAKE & RIPLEY,
57 Chatham St., Boston, Mass.

FOR SALE.—2000 lbs. very fine extracted honey; also 2000 section honey, all white clover.

G. L. JONES, Grand Ridge, Ill.

WANTED.—I shall need thirty or forty thousand lbs. of comb and extracted honey this coming fall. Give particulars as to quality, kind, and price.

J. A. BUCHANAN, Holliday's Cove, W. Va.

QUEENS from imported mother: untested, 75¢; tested, \$1.25; three-frame nucleus, with queen, \$3.00. Safe arrival guaranteed.

THOMAS & KISSEL, Horatio, Darke Co., Ohio.

Yellow Carniolans.

I have a new strain of bees. They are Yellow Carniolans. Queens are large and extra prolific. Worker bees show three yellow bands; are very gentle and the best honey-gatherers. One queen mated (safe arrival guaranteed) on receipt of one dollar. Those who are looking for a new strain of bees should try the Yellow-banded Carniolans.

14-15d H. ALLEY, WENHAM, MASS.

☞ In responding to this advertisement mention GLEANINGS.

Now Ready to Ship

Full colonies of pure Italian bees, with tested queen, in A. I. Root's Simplicity hive, only \$4.00 each. Every thing first-class. Pure Poland China pigs, eligible to Ohio record, from \$5 to \$12 per pair. Safe delivery guaranteed. I shall do by all as I would be done by.

N. A. KNAPP,
13tfdb Rochester, Lorain Co., Ohio.

☞ In responding to this advertisement mention GLEANINGS.

Rheumatism * Bees.

No doubt the best bees for curing rheumatism are pure-bred Italians that prove to be good workers and work on red clover.

We have such if you want good stock to work with and to secure you plenty of honey.

Tested queens in May, - \$1.50; in June, - \$1.25
Unt'd " " - 1.00; 3 for - 2.50
" " June, - 75; 3 for - 2.00

For wholesale prices, nuclei, lbs. of bees, and all kinds of bee-supplies, write for our 16 p. circular.

9tfdb JNO. NEBEL & SON, High Hill, Mo.
Mention this paper.

16 COLONIES in 10-frame L. hive at \$3.00 each, or the lot for \$40. P. H. FELLOWS, Broadhead, Wis.

Wants or Exchange Department.

Notices will be inserted under this head at one-half our usual rates. All ads intended for this department must not exceed 5 lines, and you must say you want your ad in this department, or we will not be responsible for any error. You can have the notice as many lines as you please; but all over five lines will cost you according to our regular rates. This department is intended only for bona-fide exchanges. Exchanges for cash or for price lists, or notices offering articles for sale can not be inserted under this head. For such our regular rates of 20 cts. a line will be charged, and they will be put with the regular advertisements.

WANTED.—To exchange all kinds of wall paper, for honey. 1tfdb J. S. SCOVEN, Kokomo, Ind.

WANTED.—To exchange 1 lb. of thin fdn. for 2 lbs. of wax. 7tfdb C. W. DAYTON, Bradford, Ia.

WANTED.—To exchange Italian bees in portico L. hives for a good set of tinner's tools.
13tfdb J. A. BUCKLEW, Warsaw, Ohio.

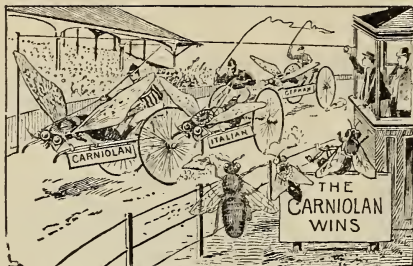
WANTED.—To exchange a 14-inch Foundation-mill, good-as new, with dipping tanks and boards, for beeswax, tin plate, metal rabbits, T tins, or offers. A. A. WEAVER, Warrensburg, Mo.
13-14d

WANTED.—Second-hand foundation machine. Give description and price. J. F. MICHAEL,
13-14-15d German, O.

WANTED.—To exchange fine young Carniolan queens, for foundation, or supplies, or other offers. F. A. LOCKHART, Pattens Mills, N. Y.

WANTED.—1000 lbs. of nice white clover bees' honey, in 1-lb. sections. Will pay cash, or exchange supplies for the apiary. Address with price, A. D. ELLINGWOOD, Milan, N. H.
14-15d

WANTED.—To exchange one 1¼ in. single express harness, 1 saddle, for shotgun, incubator, thorough bred poultry and garden cultivator, or offers. A. F. AMES, Tamasoa, Perry Co., Ill. 14d



Hurrah for the Carniolans! They take the lead; win the race; secure the prize. If you want

TONS OF HONEY,

Try the Carniolans. Hardest to winter; pleasantest to handle; best honey-gatherers. Our stock is the best that can be procured, and is bred miles away from other races.

Prices: One untested queen, \$1.00; 6 for \$5.00; 12 for \$9.00. One tested queen, \$2.50. One imported queen, \$3.50. *The Bee-Keepers' Advance* and an untested queen, for \$1.25.

J. B. MASON, Mechanic Falls, Me.

In responding to this advertisement mention GLEANINGS.

Golden Yellow Italians

* * * and Albino Queens

That will give perfect satisfaction. Tested, \$1.25. Select tested, \$1.50. Untested, 75 cts. from now until October. I guarantee safe delivery. Sold this year 113 queens.
J. W. TAYLOR,
13-15db Ozan, Hempstead Co., Ark.

In writing advertisers please mention this paper.

FOR SALE.—An apiary of 125 colonies of Italian bees, together with fixtures and honey crop, if bought soon. I will also sell my place, good house and out-buildings, and 8½ acres of land.

L. WERNER, Edwardsville, Ill.

CARNIOLAN APIARY FOR SALE!

My Carniolan apiary must be sold at once, to allow me to move to Colorado Springs.

"You have the best Carniolans in the country."
H. ALLEY.

Select imported queen, \$5; untested queen, \$1; untested, ¼ doz., \$5; tested queen, \$4; 1 lb. bees, \$1; 3-frame nucleus, \$2.00; full colonies, in 1-story Simplicity 9-frame hive, \$5; add price of queen you want. Ten per cent discount on all orders of \$20.00 or over. Large stock of all ready to ship at once. Queens by mail, others on board cars here by freight or express, as ordered. Remittance of currency, bank draft, or money order must accompany all orders.

Will sell my whole apiary and implements, and give immediate possession. House and grounds also for rent.

S. W. MORRISON, M. D.,

12tfdb

Oxford, Chester Co., Pa.

In responding to this advertisement mention GLEANINGS.

Queens by Return Mail.

Untested (Italians).....	\$1 00
Tested	1 50
Select tested	3 00
Untested honey queen.....	1 25
Tested honey queen.....	1 88
Select tested honey queen.....	3 75

Bees and brood at the same rates. See our catalogue, free on application.

A. I. ROOT, Medina, Ohio.

TESTED CARNIOLAN QUEENS, \$2.50 each; untested, \$1, or 6 for \$5. Send for price list of Italian bees and queens, bred in my Nappanee apiary. 8tfdb I. R. GOOD, Vawter Park, Ind.

Italian Honey Queens.

Tested, \$1.50; untested, 90c. A limited number extra select tested, \$2.00 each.

R. W. TURNER, Medina, Ohio.

In writing to advertisers please mention this paper.

CHAFF AND SIMPLICITY HIVES shipped on receipt of order. Price list free. 11tfdb E. J. SHAY, Thornton, Taylor Co., W. Va.

Italian Queens Cheap. TESTED, \$1.50. UNTESTED, 75c. 13-14-15d A. R. YOUNG, Rossie, St. Law. Co., N. Y.

THE "REVIEW."

SOME OF THE TOPICS IT HAS DISCUSSED.

"The Production of Comb Honey," was the special topic of the April number.

"How to Raise Extracted Honey," was discussed in the May issue.

"Comforts and Conveniences for the Apiary," were named and described in June.

"From the Hive to the Honey Market," was the topic of the July issue.

"Marketing," Will be the Special topic of the August number.

The "Review" is published monthly, at 50 cts. a year. Send for samples (free) and see if you can afford to be without it.

Address **Bee-Keepers' Review,** W. Z. HUTCHINSON, Ed. & Prop. Flint, Mich.

In responding to this advertisement mention GLEANINGS.

QUEENS and SUPPLIES.

Untested Italian queens, each..... \$1.00
Tested..... 2.00

Send for price list of bees and supplies.

Address **F. W. LAMM,**
(Box 106.) **Somerville, Butler Co., Ohio.**
Please mention this paper.

Ah THERE! One untested Italian queen, 75c; three for \$2.00; tested, \$1.50. One untested Carniolan queen, \$1.00; three for \$2.50; tested, \$2. Bees by the pound and nucleus. Send for price list. Reference—First National Bank. 10tfdb H. G. FRAME, North Manchester, Ind.

Please mention this paper.

"HANDLING BEES." Price 8 Cts.

A chapter from "The Hive and Honey Bee, Revised," treating of taming and handling bees; just the thing for beginners. Circular, with advice to beginners, samples of foundation, etc., free. 5tfdb

CHAS. DADANT & SON,
Hamilton, Hancock Co., Illinois.

In responding to this advertisement mention GLEANINGS.

FOLDING PAPER BOXES.

CRAWFORD'S SECTION CARTONS ARE THE BEST.

Send for free sample and price list, and find out the reason. A certain fact has come to our knowledge that is worth dollars to you. Send for it.

A. O. CRAWFORD, S. Weymouth, Mass.

12tfdb

Please mention this paper.

THE BRIGHTEST

Five-banded, golden Italian Bees and Queens, and the **Reddest Drones.** Very gentle; very prolific; good honey-gatherers—working on red clover—and the **Most Beautiful** bees in existence! Took 1st premium at Michigan State Fair, in 1889. Reference, as to purity of stock, Editor of *Review*. Sample of bees, five cents. Untested queens, \$1.00. 6 for \$5.00. Tested (at least 3 bands), \$3.00; selected, tested (four bands), \$5.00; breeding queens (4 to 5 bands), \$7.00. Virgin queens, 50 cents; 5 for \$2.00. Safe arrival and satisfaction guaranteed.

JACOB T. TUIPE,

Grand Ledge, Mich.

8-15db

In responding to this advertisement mention GLEANINGS.



Vol. XVIII.

JULY 15, 1890.

No. 14.

TERMS: \$1.00 PER ANNUM IN ADVANCE; 2 Copies for \$1.90; 3 for \$2.75; 5 for \$4.00; 10 or more, 75 cts. each. Single number, 5 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POSTOFFICE.

Established in 1873.

PUBLISHED SEMI-MONTHLY BY

A. I. ROOT, MEDINA, OHIO.

Clubs to different postoffices, NOT LESS than 90 cts. each. Sent postpaid, in the U. S. and Canadas. To all other countries of the Universal Postal Union, 18 cts. per year extra. To all countries not of the U. P. U., 42 cts. per year extra.

SELLING HONEY.

ANOTHER COMMISSION MAN'S EXPERIENCE; GRADING; THE PROPER SIZE OF PACKAGE; DARK HONEY NOT UNSALABLE.

IN GLEANINGS for June 15 I was surprised to see that your correspondent, Chas. F. Muth, with his experience in selling honey, advocates the use of small-size (one dozen combs) shipping-crates. We think they are the worst style of honey package that comes to market, and rarely see an invoice arrive in good order. They are undoubtedly intended to be sold to family trade by the case, but that is a failure; for families who seek to buy their supplies in a wholesale way, although good economists naturally, are not liberal-minded enough to accord anybody much profit. Hence their "penny wise pound foolish" way of oftentimes overstocking themselves, and thereby satiating their appetite for honey, and consequently they do not use nearly as much in a season as they would if bought along as they wanted it by the combs, affording the retailer or dispenser a small (due him) profit.

The reason this small-size packing-case is so generally out of condition is, freight handlers, express agents, etc., handle them so carelessly, pitching them about (play-ball fashion), where, if double the weight, they would not do so.

The double-deck case is a mistake, and ought never to be used. The flat and nearly square case being too wide and too much like a flagstone to handle, is not desirable.

Our experience and observation is, that the best packing-case for comb honey is a case holding from 25 to 30 combs one (tier) to be about 24 in. long and 10 in. wide, height of one comb. This size of packing-case can be loaded on the truck, and handled by one man where the square flat case can not be.

Although no honey should be trucked, freight-handlers and uninterested humanity generally take the easiest way, and it is difficult to always prevent them; hence we believe in packages that will best stand their carelessness.

Screwing on covers is a mistake, as screw-drivers are not always at hand, while jack-knives are more plentiful, and will open a nailed-on cover much quicker and safer.

Our advice is, put your comb honey up in thin $\frac{1}{4}$ -pound sections, being longer one way than the other, and to make the most show for the amount of honey. It is done in all articles of merchandise, and is due the article itself.

The best package for the honey-producer to put his extracted honey in is 60-lb. tin and 150-lb. pine fish-kegs, being the cheapest, and answering every purpose. The retailer prefers buying in bulk and selling in any amount his customers may want. The bottler and peddler prefer to buy in bulk and put up in their own peculiar or pet style of package. So much for the style of package that honey should be marketed in.

But we should be very sorry if Mr. Muth's idea about buckwheat or dark honey should prevail, for the sale of dark honey is many times greater, especially here in the East, than clover or any light honey, simply because it sells at a price that the masses can pay. Of course, if clover or any light honey could be sold at the same price as buckwheat, dark, or mixed honey, would be as much sold; but I doubt whether much more, for the masses are not connoisseurs or epicures generally, and the dark honey is heavier bodied, goes further, and generally does not have as rank a bee flavor as light honey.

Right here the thought suggests itself, that the less different names given to honey the better, for

they are confusing to those who are not up in bee culture any better than myself. All light honey is known as clover honey, and all dark or mixed honey as buckwheat honey, and that is enough, commercially. If honey goes on the market as clover, buckwheat, basswood, goldenrod, etc., and on that line finally the name of every weed and flower that a bee gets any honey from, it will cause a useless confusion in trade, and interfere with a free consumption; for when one wants to buy honey, if he can't find some certain flower, honey that some enthusiastic wise beekeeper has told him his last light honey was made from, he won't buy.

Concerning extracted honey, I think the dark honey has the advantage, for it has no season, but sells the year through for about the same price; while to get the price that light extracted honey commands, it has to be sold early before cold weather, hence its selling season is much shorter; and if kept over that season it depreciates in price more than the dark extracted honey. I have no inventions in the honey line. I am writing this only for the good of the honey trade, if there is any good in it. If a uniform style of package could be adopted, so that the much-despised middleman could depend upon receiving it so he could duplicate his orders at all times with the same style of package, the consumption of honey would increase many fold.

H. R. WRIGHT.

Albany, N. Y., June 25.

Friend W., I know you have for years been remarkably successful in disposing of dark *comb* honey; but I did not know before that you had succeeded in finding a market for dark *liquid* honey. We are very glad indeed to know it; and it illustrates once more the fact that people buy and use many things when they once get into a notion of doing so. In our vicinity they have got into a notion that honey must be white, and therefore they will not even taste of any thing else—at least a great majority of them.

SHIPPING AND SELLING HONEY ON COMMISSION.

SUGGESTIONS FROM A COMMISSION MAN.

Mr. Root:—I was induced to go into the receiving of comb honey for this market last August, by a man of wide experience in that line. Of course, he was allowed to write and solicit consignments, and all he did say on paper I do not know, as I kept no copy then of the letters as I do now. Well, on came the honey from different sources. It was very gratifying to know that the man was well known among bee-keepers, having been in business quite a while before. Just about the time the honey came in and should have been sold and put upon the market, he got into some difficulty that detained him from active work for me or us, and then the whole thing of making a new trade and a new market fell to my lot; and although not successful as to obtaining the prices the shipper wanted, owing to the bad season for honey, we managed to dispose of about 30,000 lbs. of comb honey and 60,000 of extracted honey, at prices, for comb honey, 9 to 12 cts., for dark and buckwheat; 12 to 13 for number 2 clover and basswood, and 14 to 16 for fancy No. 1 clover; paper boxes, 1 cent more, and the extracted 5½ to 7 for buckwheat, fall flower, and

dark; and 6½ to 7 for mixed and for basswood; and No. 1 white, 7 to 7½ and sometimes 8 cents. Of course, we charged 5 per cent commission on extracted and 10 per cent on comb honey; charge no interest, insurance, or storage, but merely take off the freight and cartage or expressage; and with all that we have men ship us who are not satisfied, and make all sorts of threats of what they will do about publishing us before the convention held by beekeepers, etc., so that I will not get (they say) any one to ship to me. Now, I do want to ask you if the few men who have written me thus are a fair type of bee-men or honey-shippers. If so, I hope they will be judicious enough not to place themselves in a position to be answerable to the law for defaming the name or the man's business.

I will now give you some points in my experience that have a tendency to ruin a market on comb honey, so that it is impossible to get fair prices for it; for instance: Last fall, nearly every commission house that handles produce or vegetables had several small consignments of honey, and they sold it at what they could get for it, and especially if some of it came in a leaky condition; instead of fixing it up and getting at the actual loss and selling the rest at a price to sustain the market, they let it go at any thing to get rid of the "sticky stuff," and the sharper who bought it does what the receiver should do, and he who sells it to the consumer at so low a price that the honest handler says, "I can not get honey to sell at that, hence I am off." Now, as a remedy, every shipper of honey should write to any large city and find out whether there was or is a honey-house there, or a man who makes a specialty of handling honey in all shapes, and correspond with him about their productions, and in that way his honey goes to one party, and the wholesale trade know where headquarters for it is, or should be, and there they go to get it, good, bad, or indifferent, and prices for all kinds and styles, and much better prices could be obtained and much more satisfactory all around.

I should like to speak about a few things in regard to honey being broken in the case. We can not recover from the railroad company every time, as the companies receive it only at owner's risk of breakage; and if it comes in a leaky condition they say they are not responsible for it, unless it should be smashed in transit by a wreck, or packages broken to pieces in transit.

E. J. WALKER.

Philadelphia, Pa., March 14.

Be not weary in well doing, friend W. You know the rest of the text. Do your duty well and faithfully before the great Father above, and you will surely find your reward. Faithful, honest, conscientious commission men are always in big demand. In regard to shipping at the owner's risk, I think if I were shipping honey I should prefer a higher rate, and have it go at the railroad company's risk.

SPACING BROOD-COMBS.

IS IT 1½, 1⅞, OR 1¼?

AFTER reading GLEANINGS, pp. 490–2, where the points are so ably brought out on both sides, I would not even need to make a comment were it not that the subject is one of more than ordinary importance. I wish I could feel that I fully deserve

the compliment Bro. Doolittle pays to my style of writing; but the fact is, that, in so many things, as in the present case, I am so ignorant of just where the truth lies, that I dare not be very positive. I sometimes say, "There are a few things I know all about, but bee-keeping isn't one of them." But about that distance. I wish we could have a series of very full tests of what bees themselves would do under different spacings. I don't think I believe in following nature quite as much as Bro. Doolittle—we kill off most of our roosters, and cut out drone comb—still, when there is no special reason on the other side, nature is a pretty safe guide, and nature and Doolittle together make a strong team. I never thought of the cappings in measuring, and who but Doolittle would have thought of measuring them as he did? The question the hardest to be decided is, how much space is needed between combs to allow bees enough to get up the requisite heat in the spring? As suggested, the changing-about of frames makes more room necessary than if each comb always remained in the same place. But, say: With the Keeney method of wiring, or, perhaps better, with Hatch's plan of leaving out one diagonal, we can have the septum of the comb exactly in the middle of each frame; and then if spaced at fixed distances each comb will exactly fit wherever it is put, except where bulged with honey. That $1\frac{1}{2}$ of nature is hard to get over. But doesn't nature make allowance for corrugated combs and for drone comb? I just measured a piece of new drone brood sealed, and it was $1\frac{1}{2}$ in thickness. I didn't suppose it was so thick. Is it all so thick? For such comb $1\frac{1}{2}$ would seem close spacing.

What has now been brought out by Doolittle's article leaves the matter in somewhat clearer light, and we have these data: Sealed comb is at least one inch thick, and workers stand $\frac{3}{8}$ high on it. Allowing the workers to stand back to back makes two layers of bees $\frac{3}{8}$, making $1\frac{1}{8}$ necessary if spacing is exact and the bees just touch. But spacing is not exact, and the bees should not be allowed to rub the feathers off their backs, so it seems a little more than $1\frac{1}{2}$ is needed. Nature has $1\frac{1}{2}$, so no more than $1\frac{1}{2}$ is needed; and as that allows corrugations and drone comb, neither of which we want, we can get along with a little less. Now, Bros. Doolittle and Root, you have made the matter clear enough so that for the present I'm going to settle down on $1\frac{7}{8}$ till somebody comes along and knocks me off from it. I'm rather sorry for it, because all my plans are made for $1\frac{1}{8}$. All the same, I thank you for the light you have given.

After I had written the above I read it over at the breakfast-table, when my assistant said, in a rather vehement manner, "I don't care, I'm with Ernest; $1\frac{1}{8}$ is all right, nature or no nature. Look at the nice frames of brood we have with $1\frac{1}{2}$ spacing, filled clear to the top-bar, instead of having a big margin of honey all around." And then she took a big bite of bread to emphasize her position. I tried to make a compromise something after this fashion: "Yes, I think there is something in that, and our present spacing makes it much easier to get out the dummy. I don't suppose it makes much difference in hot weather whether the spacing is too wide or too close, so for convenience in handling we'll let the frames remain as they are; but when it comes to the last spacing of the season we'll put the dummy close to the side of the hive or

take it out altogether, and leave $1\frac{7}{8}$ through the winter and spring."

GETTING BEES STARTED IN SECTIONS.

In reply to your question, friend Root, on page 493, I may have had bees "that cram the brood-nest and leave the sections untouched," but I have not observed it. If you ever again find such a colony, try it with a good bait section; and if they leave it untouched, please report it. I think the very best bait is a section partly filled, taken bees and all from a hive where the bees are at work in the super. That idea I got from you, but ordinarily the empty comb answers every purpose.

BEES FILLING OLD SECTIONS.

By the way, I've watched pretty closely about the bees finishing these baits; and although up to July 3d no sections are entirely finished, the sealing is in all cases more advanced on the baits; and if I ever find a case in which the empty foundation is finished before the bait, I promise to report it. You can now go to super after super, and find sealing commenced on the bait, but on no other section.

Marengo, Ill., July 3.

C. C. MILLER.

Very likely, friend M., you have no trouble with bees that won't work in sections, so long as you make it your invariable custom to use the baits; and right here is a pretty good hint for some of the rest of us.

THE DIAMOND RATTLESNAKE.

PROF. COOK IS HAPPY IN THE POSSESSION OF A LOT OF POISONOUS RATTLESNAKES.

Dear Friend Root:—I wish I could invite all the readers of GLEANINGS into my laboratory and show them our beautiful rattlesnake. It comes from Mr. S. A. Preston, Burnet, Texas; and considering its long journey it is very agile and sprightly. It is very handsome. The colors are a rich brown, and the light diamond-shaped spots on the back are very beautiful. He brought his rattle-box all the way from Texas with him, but refuses to shake it either for his own or others' amusement (?). Perhaps he mourns for the (?) he left behind him, and so he has no heart for amusement. His appetite also seems to be wanting, for he refuses to eat even frogs, with the delicate hind legs that are so coveted by epicures. Possibly he will break his fast after a night's rest.

And just now a telephone dispatch says I have another rattlesnake at the express office, from W. H. Rempfer, Swales, Pa. I shall have him in the cage with the other very soon. We shall be glad to learn how the rattlers of Texas and Pennsylvania take to each other. Heigh-ho! Another reader of GLEANINGS from Louisiana sends a third rattlesnake. I shall put them all in the box together, and will report later to the readers of GLEANINGS how they behave. I can give a very interesting paper on these terrible reptiles, which I will do for your readers as soon as I have had a chance to become better acquainted with these new arrivals. Now for a good large live copperhead and moccasin. Who will send them? I want the finest cage of poisonous snakes in America. Thanks to GLEANINGS and its readers for the prospect.

THE HELLGRAMMITE.

Mr. C. F. Thomas wishes me to report on a large lace-wing which he has sent to me. The lowest order of insects is the neuroptera, or lace-wings.

They are so called because of the numerous veins and cross-veins to their wings. Thus their wings resemble gauze or lace. I hardly need say that the dragon flies, or darning-needles—the bee-hawks of the South—and the day-flies, which often gather about the street-lamps in our lake cities, like Toledo and Cleveland, belong to this great order. Many of these insects, while larvæ, live in the water and feed on the small aquatic animals that keep them company in their watery homes. Nearly all lace-wings are predaceous, and feed wholly on other insects, and so are to be classed among our beneficial insects.

The hellgrammite (*corydalis cornutus*) is our largest lace-wing. It is four inches long and six inches from tip to tip of wings when they are expanded. The specific name, *cornutus*, comes from the jaws, which are developed into two long horn-like organs which strongly remind one of the tusks of the elephant. The larvæ is a long flat insect, with strong jaws, and lives in the water. We often catch them in the Cedar River, which flows through our college farm. The insect pupates under some board or stone at the water's edge. I do not know the origin of the common name, hellgrammite, but think the alarming appearance of the fly and the larvæ might have suggested it. Terrible as the insect looks, it is entirely harmless, and no one need fear it in the least.

ANOTHER HERMAPHRODITE.

Mr. Timpe has sent me another hermaphrodite. This one is really a drone, as it has the male organs. Its head is really drone, though the antennæ, in number of joints, are like those of the worker. The legs on one side are like those of the drone, while those on the other are like those of the worker. As I understand, this bee is from the same queen as the other one sent a few days since. I think this is a very interesting matter. I believe there are some very interesting scientific inquiries that these hermaphrodites may answer. I should take it as a great favor if any bee-keeper who may discover such bees would send them to me. I wish to make a thorough study of the whole question.

Agricultural College, Mich., July 2. A. J. COOK.

EDITORS ANSWERING QUESTIONS, &c.

UNNECESSARY AND FOOLISH QUESTIONS.

THE more care I devote to the perusal of your papers (A B C and GLEANINGS), the more I feel convinced that my last letter was even too weak in regard to the honor due you as a writer and editor. Your way of writing is exactly what most bee-keepers need—plain, yet solid information—saying much in few words. Oh how it amuses me to find, from time to time, that some are questioning you on subjects which you have so clearly answered long ago. Good heavens! what patience an editor must have! This reminds me of something that happened at our late State Farmers' Institute, at Chrisney, Ind., last February. I was asked to give a lecture on the farmer's home. It was very well received. The second day, a professor of Perdue University had a very instructive lecture on crop rotation. He spoke exceedingly well, with a voice clear and well adapted to the locality. After the lecture was given, the gentleman asked if any one among the audience would like to ask some questions. A bright looking man arose and asked, "Do I under-

stand the speaker to say that we should plant wheat every year on the same piece of ground?" Holy Moses! I could have kicked myself. I said to myself, "If my lecture of last evening, on the farmer's home, was as well understood as the lecture of Prof. N. N. on crop rotation, then God help us."

When—yes, when—will our people begin to study and think just a little more than they do? Again and again you are asked how bees should be handled; how the frames must be spaced; how to secure a good crop of honey, etc. Does it not require more than ordinary meekness to stand all this? I can only admire men who possess such virtue and act accordingly.

THE HEAVY TOP-BAR A GOOD THING.

It gives me a great deal of satisfaction to find that a heavy top-bar frame is asked for by the fraternity. I have used them since 1883; also a friend of mine, Mr. J. B. Mueller, principal teacher at Ferdinand, Ind., has used them since that time. We used them alternately—one with a deep top-bar and the next one a Simplicity frame with metal corners. Sections can be placed on thick top-bar frames without any sagging whatever. Bees will place less wax on top of these frames, even if no quilt is used for a time. Yet I fear that all will not hold good for what certain writers claim for them. Combs rest firmer in these frames, and wire is not needed to keep the foundation in shape, or to keep comb from breaking. Such frames are more durable and more stable, if placed in the hive. But an active queen will get upstairs and have things all her own way, as you say, in spite of these thick-topped frames. Even to a third story will her majesty ascend, and see that all her subjects are doing their work. This is our experience. By all means, staples should rest in either end of the frame, else the proprietor will kill more bees than in handling the thin-top-bar frame. This is not paying to any one unless he cares to possess a good many stingless bees besides the dead ones.

A DOUBLE-WALLED SIMPLICITY.

I should like to draw your attention to a double-sided Simplicity hive. Make a second hive that will exactly cover the Simplicity hive, allowing only tar-paper space. Nail or screw together, and you have a hive next to a chaff hive. I consider this the best hive, in very cold as well as in very hot weather. I have the idea of this hive from one my father, Hon. J. C. Stenger, used for 28 years. In all these many years this same hive stands on a limestone rock, and never have the bees suffered in this hive. They swarm less from that hive; and in regard to comb honey, it has been the "boss" for 28 years. These, certainly, are convincing facts in favor of a double-walled Simplicity hive. Give your opinion on this subject.

THE TOBACCO DEVIL MORE HARM THAN KING ALCOHOL.

In conclusion, I say this much to you: That in fighting the tobacco devil you have a friend and helper in the writer of these lines. Tobacco does even more harm than the heavy drinks, and they do harm enough in this world of ours.

[REV.] STEPHEN STENGER.

St. Meinrads, Ind., June 24, 1890.

Thanks, friend S., for your kind words. But we do not have very many foolish questions—certainly none as bad as the one you mention. It does, however, sometimes seem positively awful to find how people

will get hold of things when one is trying hard to make them plain. Notwithstanding, let us not discourage people from asking questions—let them come. Hives made double walled, with tarred paper between, have been a long while in use. Our experience is, that they do not dry out as well as the chaff hive; that is, they are more likely to be damp and moldy inside during a spell of damp weather.

TAKING QUEEN-CELLS AWAY FROM THE BEES, ETC.

DOES SHAKING COMBS INJURE THE EMBRYO QUEEN?

A correspondent wishes to know "if it will answer to shake the bees off the frame of brood having queen-cells upon it, if it is wished to save the cells for use." No—not by any means. Very many have been the number of queens killed or injured for all time by this plan of getting the bees off the cells. If the cells are only just capped over, such shaking dislodges the royal larva from the royal jelly, throwing the larva to the bottom with such force that it is either killed outright, or, in failing to get back, dies where it is. If further advanced, such shaking deforms the queen by her having crippled wings or legs, or, what is more often the case, the queen has a dent in the abdomen, certain segments of which are dented inward or the whole flattened or curved. While this last is not as bad as to have the wings deformed, yet it is a very rare case where a queen with a deformed abdomen proves to be a really good queen. Such queens generally become fertile and lay quite well for a time, so are of some value; but those whose wings are crippled are worse than no queen at all, for they can never become fertile, while they stand in the way of our successfully introducing a laying queen. In case such crippled-wing queens are of the German or hybrid race, they are very hard to find, and the parties who have ordered queens for supposed queenless colonies having such crippled queens, and lost them in trying to introduce them, can be numbered by the score, if not by the hundreds. No one should attempt to introduce a queen to any colony, unless he takes away the reigning queen at the time he puts in the new one, without first trying the colony with unsealed brood to see if they are really queenless. If they build queen-cells on this brood he can know that they have no queen; if not, then he may know that, if he tried to introduce a queen to that hive without first finding and taking out that which the bees are reverencing as a queen, he will be certain of losing the one he would have preside over the hive. But, to return: How shall we get the bees off the queen-cells if we can not shake them? The way I manage is as follows: Upon removing the frame of cells from the hive it is carefully set down at the entrance of the hive, the same side up that it occupied while in the hive, and the bees on it thoroughly smoked so as to cause them to fill themselves with honey while the hive is being closed, when smoke is again poured upon them to such an extent that the most of the bees will run into the hive, when the remainder are brushed off with one of the bee-brushes which can be had of A. I. Root. If they are loth to run off the comb into the hive, the whole can be brushed off; but be sure that

they have filled themselves with honey before you undertake to brush off so many bees, unless you are willing to stand many stings, for the bees around queen-cells will fight with a vengeance for them, unless the precaution is taken to coax them to fill themselves with honey. If the weather is cool and the cells are to be placed at once in the hives, it is a good plan to take the bees along with the cells so as to keep the cells warm, when, with a little smoke, drive the bees off the cell you wish, so that they will be out of the way while you take it off the comb. After the cells are all off, then the bees can be shaken off the comb at the entrance of the hive, the same as from any other frame. This latter way of not trying to get the bees off till after the cells are, is good at any time where the cells are to be placed in different hives about the apiary.

STORES FOR WINTER.

As the basswood will be yielding honey in most localities by the time this reaches the readers of GLEANINGS, I think it will not be amiss to tell of a good plan of securing good stores for the bees to winter on. I know many will say, feed sugar syrup, but it is quite a job to feed a whole apiary with liquid feed at a time when robbers are always plentiful; besides, at the present high prices of sugar there is little if any profit in it. Good basswood honey is good enough for winter stores, and the advocates of the pollen theory can not object, for there is no pollen ever gathered from the basswood bloom. The plan is this: When honey commences to come in from basswood, four or five nice worker combs are placed in the upper story of the hive which we are running for extracted honey, and on the top-bars of each of these are placed the letters W. S., which signifies winter stores. These combs are to be placed about 1½ inches apart from center to center, and are not to be extracted from at all. As soon as the honey in these combs is sealed about two-thirds of the way down, they are to be spread apart, and other combs or frames filled with foundation placed between them in each alternate space, or enough to fill out the hive. These last are to be extracted from; but the former are to be let alone to the end of the season, when we have all the stores the colony needs, well ripened and of the finest quality. In preparing the colony for winter, place three or four of the frames of honey next one side of the hive, then place in one of the frames with the bees on it which has very little honey in it; next, the last comb of honey, and finally two more combs with the bees on them, when the hive is to be closed and the bees from the remaining frames that were formerly in the hive shaken off at the entrance. This is done so that the bees shall cluster at one side of the hive early in the winter, rather than in the center; for when in the center they frequently eat all of the honey toward one side of the hive; and if this happens in very cold weather they starve there, not being able to cross over to the other side. With the above plan they are all right as long as there is any honey in the hive.

G. M. DOOLITTLE.

Borodino, N. Y., July 7.

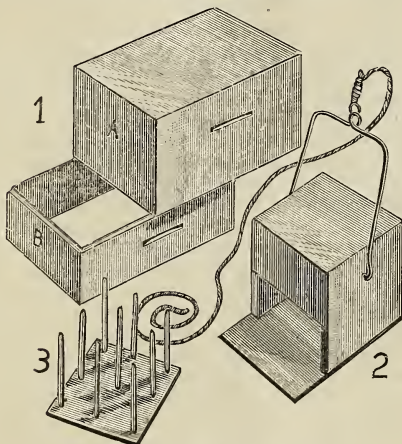
Friend D., I fear you are a little too emphatic in regard to what you say about shaking combs. It was suggested, years ago, to purposely save cells from combs that had been put into the extractor, and we did not find an imperfect queen as the result. They may, however, have been at such a

stage that they were not easily injured. At other times I have been troubled because of the number of queens with bad wings and crooked or indented bodies, and I should not be surprised if your remarks point out and explain some of these cases. I fear that many of our friends will object to using basswood honey for winter stores.

ANOTHER HIVING ARRANGEMENT.

O. R. COE'S METHOD.

Friend Root:—The method of hiving swarms that I have used for a few years is so simple that perhaps it might be best to have it described in GLEANINGS. I have a hiving-box made as follows: A square box, 12×12 inches, and 12 deep, with half of the front side cut away. For bottom I nail on a board 12×18, which extends out 6 inches in front; and for a cover a plain board in which I bore several half-inch holes and put in sticks 4 to 6 inches long, which extend down into the box on which the bees cluster. Fig. 3 shows the inverted cover with the sticks, and Fig. 2 the hiving-box complete, with cover on. The handle of the box is a small iron rod to which I have attached a few feet of small rope.



COE'S HIVING APPARATUS.

When a swarm comes out I wait until they just begin to cluster on a limb when I place a ladder near them. I then take the hiving-box and hold it in the hollow of my bended arm. I now tip the box forward until the bottom-board of the box stands at an angle of 45 degrees, and with the other hand I shake the cluster of bees down into the box, and they at once go up and cluster in the box. I now throw the rope over a round of my ladder or a limb of the tree near the ground, and leave it suspended. With my smoker I prevent any more bees clustering on the limb from which they were first shaken into the box, and in a few moments they are all quiet in the box.

I next prepare their hive, and always place an empty half-story under it, as in Fig. 1. A yard square of enamel cloth nailed to two pieces of boards 1½ wide, I spread in front of the hive. I now take the cover from my hiving-box with nearly all of the bees hanging to it, and the sticks, and shake the bees on to the enamel cloth; and if there are many bees yet on the sides of the box I turn it

over and shake them on the enamel cloth also; then grasp the ends of the sticks of the enameled cloth, and, as you lift the bees up, they will slide down toward the center as it bags down, and then I hold it so that they slide down into the half-story hive. I now slide the hive forward. But few bees will fly, and the swarm is hived very quickly.

SOME OF ITS ADVANTAGES.

The great point is, that I can get them into the box as quickly as they would settle on to a limb or on to a Manum swarming device, and then, to all intents and purposes to the bees, they are hived. I can place a dozen swarms (if I have so many hiving-boxes) on the stands they are to occupy, and they will fly from and to the box, and mark their new location as well before as after they are placed in the hive. This is a great point with me when I have many swarms. I never had a swarm leave the hiving-box after it was once in it all right, until I shook them out. The enamel cloth fastened to sticks is a grand thing to use in transferring and many other uses, as bees can be shaken on to it and slid off where we want them.

O. R. COE.

Windham, N. Y., May, 1890.

GLEANINGS FOR JULY 1ST.

SOME OF ITS CONTRIBUTORS.

Friends Root:—(You see I want to include Ernest in my greeting, for we have learned to appreciate the practical things from his pen as well as the good things from A. I.'s). I have just left off devouring No. 13 of GLEANINGS after having read every thing in it from cover to cover, including most of the advertisements, and now I propose doing what, many times in the past year, I have felt like doing, but never did; i. e., give you both my heartfelt thanks for the bi-monthly feast of good things that GLEANINGS never fails in bringing us. I need not say, "God bless you," for it is evident to all the 10,002 subscribers, and the additional host of readers of GLEANINGS, that he is constantly doing that. Let me say, rather, may God's blessing continue with you in all your future as you now enjoy it; and I will add, that I believe it will so long as you keep his colors nailed to the mast, and your one hand placed in his while the other holds the helm. And while I give thanks to yourself and Ernest, I want a good big share to go out through GLEANINGS to Dr. Miller, Mr. Doolittle, Prof. Cook, Mr. Manum, Mr. Hasty, Rambler, Mr. Heddon, and the many other veterans who so ably and interestingly discuss all pertaining to the apiary.

BLACK BEES GENTLE.

A little more than a year ago I knew next to nothing of one of God's most wonderful creatures, and scarcely ever gave the honey-bees credit for the delightful sweet I had so often enjoyed. But now, thanks to you all, and to the Father's hand that guides our steps, and led me to invest in a few colonies of bees, I have had the veil removed; and while I still stand enraptured on the threshold, and feel that I have but entered on a pursuit that promises exquisite pleasure, I have already enjoyed so much in the investigation of my interesting little friends that I am already a thousand times repaid for the score or so of stings I have received. It appears to me I must have secured an exceedingly gentle lot of bees. I have ten colonies. They are the common black bees, with possibly a

very slight admixture of Italian, and yet I can open any of them, handle as I desire, and when I please, and change from one hive to another, and brush out remaining bees without any such "lively fracas" as you had with your cross hybrids. In fact, the nearest approach to any such circus I have experienced was with pure Italians, in the apiary of the Misses Barnes, at Piketon. A short time since I made them a business call, and while in the apiary with a hastily improvised veil over my hat the wind blew it off, and in less time than I can tell it a dozen or more little warriors took a mean advantage of the situation and attacked me from behind, and with drawn spears they began prodding me so vigorously in the back of the head that I, like you, made an inglorious retreat; nor did the little rascals stop with "a field fairly won," but followed in very hot pursuit after I had crossed the fence, and until I entered the invitingly open door of an out-building some rods distant. But, thanks to a highly appreciated constitutional condition, the dozen or so stings received did not inconvenience me any worth mentioning.

I don't know that anything I have to say will be of interest or profit to the gleaners of GLEANINGS; but feeling assured that you have a capacious waste-basket I can not forbear giving an item or two of

MY EXPERIENCE.

First, after nearly killing two colonies with the smoker while transferring from box hives, I discover I don't need any smoker at all to handle bees—at least, such as I have at present.

Second, I have learned that, even in fruit bloom, if weather be cold and wet, bees can not, without stores, keep from starving. I paid one colony and very nearly two, for this information, but offer it to my brother-amateurs free of charge.

Third, I have learned not to set frames of brood in the sun while searching others for the queen. I paid the greater part of a nice frame of brood and some bees for this practical knowledge; and if other amateurs don't say, "The fool ought to have known better than that," I will not charge them a cent for this bit of experience either.

Fourth, I have learned that it is not safe to lay a caged queen on the ground. The ants are liable to kill her inside of ten minutes. I paid a nice prolific black queen to learn this, and feel thankful it was not a more valuable one.

Fifth, I have learned a much more simple and easy way to introduce queens with the Peet cage than by fastening to the comb, as per printed directions. Just lay the cage on a board with the tin cover down; withdraw the tin and put it on from the other end. Now draw it back so as to expose about a quarter of an inch of the candy; lay it on the frames with the wire side down, giving the bees access to the candy, and the work is done. By the time they get the candy eaten out they are ready to accept the queen. I have introduced five in this way, successfully.

Sixth, I am half persuaded to believe I have learned a mechanical reason for the queen laying drone and worker eggs, and that she does not control it at all. But since amateurs always get to know so much more than the oldest veterans, and so much that, by practical experience, they are forced to unlearn, I will not give this crude idea to the public until I have proved it beyond question. If some day I succeed in getting workers reared in

drone-cells you will hear further from me on the subject. If not, then you will not learn of my folly.

QUESTIONS.

Now for a thing or two I have not learned, but which I should like to know. Why does a large prime swarm, with a fine prolific queen, start a queen-cell within a week after being hived, and before the frames are more than half filled with comb? I have such a case. Is it phenomenal?

Has any one ever noticed a queen deposit an egg in a queen-cell, or is there any indisputable proof that she ever does so?

And now I must tempt the maw of that capacious waste-basket a little further, and have my little say on that very interesting case of Jones vs. Brown. With all deference to Mr. Caldwell's legal acumen, I wish to modestly protest against his assuming that, during time of contract, Brown and Jones are alike owners of the bees. Now, if I understand the case, Brown, neither by the contract nor otherwise, gained any proprietary interest in the bees. Jones was as much the sole owner under the contract as before the contract. But, like landlord and tenant, he had intrusted his property into the hands of another, under certain conditions. As in the case of a professed tailor spoiling cloth intrusted to him to make a garment of, he is liable for damages to the full extent of the loss, so a professed apiarist should be liable for loss arising from want of skill or gross negligence, clearly proven, but no further. Let us vary the case, and suppose Jones was the owner of an extensive bee-hive factory in Johnstown, Pa., prior to the flood. He enters into a contract with Brown to take charge of the plant, on condition that Brown's labor, as manager, should balance Jones' capital invested in the plant, and that they were to bear all expenses of manufacturing equally, and divide the profits. The flood sweeps the factory out of existence. Can Jones hold Brown liable for the loss he sustains from a cause in no wise attributable to Brown's want of skill or negligence as manager? We think not. If the bees had been swept away by a cyclone within an hour after Brown took charge, would any sane man hold him liable to Jones for the loss? Would it in any wise alter the case if the cyclone made the havoc one or two years after Brown took charge? or if the cyclone was one of unforeseen and unavoidable disease? It seems clear to my mind, that, if the loss was by reason of want of assumed skill or negligence on the part of Brown, he should bear all the consequences; otherwise it is Jones's loss.

Wheelerburg, O., July 7.

J. M. BROWN.

Friend B., your bees are gentle because they are getting honey. Wait until the honey-flow stops, and then see if you can handle them without smoke. I do know that bees are many times smoked most unmercifully when there is not the least reason in the world why they should be smoked at all. Your hints and experience are valuable. Most of the veterans have learned as you have learned; but you will probably save a good many beginners from loss. Your plan of introducing by the Peet cage usually answers as well as any; but where the queen is feeble, I should prefer to have her directly on the brood-comb. I think the ground has been gone over pretty fully in regard to why a queen lays drone and

worker eggs. Large prime swarms do not, as a general rule, start queen-cells within a week. I am inclined to think the queen of that colony will be superseded before a great while. Yes, a queen has been seen depositing an egg in a queen-cell.—The discussion in regard to Jones and Brown emphasizes the fact that partnerships, or bees on shares, seem to be, at the best, complicated and unnecessary. Better buy or sell outright.

**SOME GLIMPSES OF THE HOME OF
T. B. TERRY, HUDSON, OHIO.**

LAWN, GRAVEL WALKS, EVERGREENS, ETC., IN THE
FRONT, AND THE LUSCIOUS STRAWBERRIES
IN THE REAR.

IN our last I promised you some pictures of friend Terry's home, and I am glad to see that our artist has succeeded so well.

When I asked him what he did to the evergreens to make them so even and regular, and of such bright luxuriant growth, he replied that he did nothing at all. They are the ordinary arbor-vitæ. For a while I was a good deal puzzled to know why they did not look as our evergreens do, and a good many others'—one small, indifferent tree, and then another large one, and so on. The secret of it is, the ground was under-drained, enriched by thorough tilth and clover before the trees were put out. In fact, all the ground around friend Terry's home has been worked up to a degree of fertility and evenness of texture that makes all the plants and trees just alike. If the arbor-vitæ grows of its own accord of the beautiful shape of those about friend Terry's home, I should never think of bringing them into artificial shape with shears and trimmers.



HOME OF T. B. TERRY.

The graveled walk, the shrubbery, and vines by the porch tell their own story; and a row of evergreens on the right and on the left called forth exclamations of surprise from me on account of their regular appearance and beautiful shape. The house, it should be remembered, is on the north side of a street running east and west. These rows of evergreens, therefore, run north and south; and there is another row, seen in the strawberry picture, just across the back end of the dooryard, thus making an inclosure.

Having now viewed the front, the reader will please go with me up the gravel walk. We will turn off to the right, near the corner of the inclosure. Right here is the out-building that friend Terry has several times described in our agricultural papers. It is such a beautiful, secluded spot, overshadowed by the evergreens and other trees, that a picture of it is given in one of our rural papers as a hint to farmers in the way of comfort and convenience to their wives and grown-up daughters, to say nothing of the younger ones. As we step through the ever-

greens we come into the half-acre of strawberries. And here is a picture of what you see. This picture was taken from a hill, or gentle elevation, north of the house. Many of the strawberries were in blossom at the time it was taken. If you put on your specs you can get a glimpse of the blossoms here and there.

□ Between the evergreens and strawberries is a roadway. At the left of the roadway, and right back of the house, is the new half-acre of strawberries for the next season.

lings. As the Sterling is imperfect, a row of Downings comes next as a fertilizer. Then we have Cumberland, Gandy, Bubach, Haverland, Jessie, and perhaps some others. They are alternate, so as to have one row of perfect after every two, or, at the furthest, three, rows of imperfect. The straw mulching is plainly visible in the paths; but the cut straw between the plants can not be seen except by moving the foliage aside; but in the whole patch there is no ground visible—nothing that can soil the berries. Dur-



TERRY'S HALF-ACRE OF STRAWBERRIES.

These were planted in rows four feet apart, and plants two feet apart in the row, as I have explained. On the other side of the roadway is the wonderful half-acre which I recently visited while it was in full bearing. There are fourteen rows of berries, as you will see by the picture. Perhaps an expert could tell the varieties by the foliage. Next to the potato-field, on the left, there are three rows of some variety, the name of which I can not now remember; then come three rows that I am pretty sure, by their looks in the picture, are Ster-

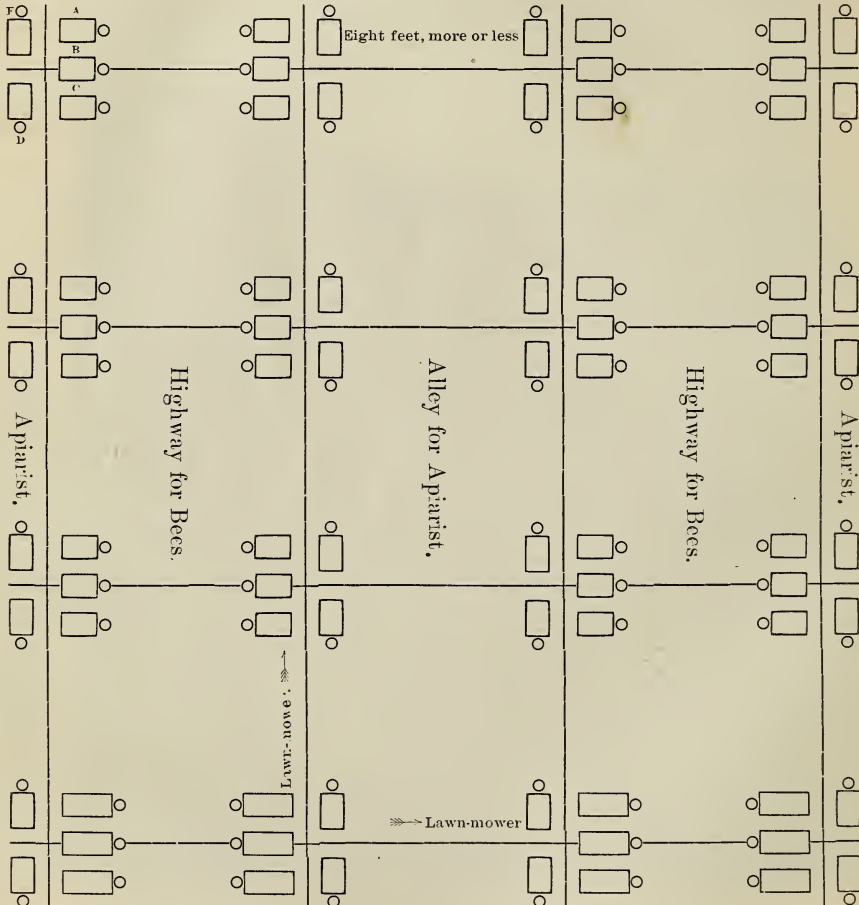
ling picking time the straw is tramped down in the paths much flatter than what it appears in the picture; and one of the worst troubles, if it *was* a trouble, was the long stems of the Haverlands thrusting themselves right square in the paths in order to get sunshine to ripen. I believe friend Terry proposes to make the paths, especially through the Haverlands, a little more than a foot wide hereafter. Over in the field beyond the fence we saw the wonderful crops of wheat—35 or 40 bushels to the acre, right straight through the field. There are no

trees on Terry's premises, except around the house. He does not tolerate a tree in his grain-fields at all.

PLAN FOR APIARIES.

A UNIQUE WAY OF ARRANGING 80 HIVES.

Friend Ernest:—I was very much interested in the article by C. A. Hatch, and your own following, page 374, May 15, as I have given this subject considerable thought of late; and seeing that suggestions on this are acceptable, I venture to offer mine; but I shall not be offended, and order you to stop sending GLEANINGS, if it never appears therein.



S. E. MILLER'S PROPOSED APIARY.

Our apiary is arranged hexagonally, and we are pleased with it in nearly every way; but when it comes to running a lawn-mower through it, I always wish it were arranged on a plan that would admit of running the mower parallel with the hives both ways. I have also noted what the senior editor has to say on the subject. Of course, we can have our hives in straight rows, and still be on the hexagonal plan, and that is just how ours is arranged; but we are bound to run the mower diagonally one or two ways in order to cut the grass between the hives in the rows. I herewith submit a

plan of my theoretical ideal apiary. You will take notice that an apiary managed on this plan, containing 4 groups each way (16 groups), 5 in a group, would contain 80 hives—just about the proper number, and need not occupy a plot of ground to exceed 60 feet square, and still leave ample room.

In regard to bees going to the wrong hive, I should say that those at B would know their hive was the center one, C the left, A the right of the three facing one way; those at E and D would not be at all likely to mistake another hive in the same group (see diagram), and they would not be any more liable to go to the wrong group than they would if arranged on the hexagonal or Mr. Hatch's plan. You will notice that, when the grass in the

main alleys is cut, the lawn-mower can be run between the hives in a group, though the distance from A to B should be some greater than I have allowed, in order to allow a large-sized mower to pass E without varying from a straight line. E could be set out so as to be on a line with A inside, but this would throw it out of line on the outside, unless the hives are square.

Hives E and D would have their entrances at right angles to the alley for the operator, and he might be in the way of some of the bees from said colonies, but not more so than if arranged other-

wise, and we can not expect to have it so arranged as not to be in their line of flight more or less at times, as they sometimes come out and turn short around the hive before rising higher than a man's head.

SHADE FOR HIVES.

Allow me to say, that the longer I keep bees the less use I have for shade over them. First we planted grapevines, and they did not make a growth to suit me, and I concluded it would be altogether too much labor to keep them nicely trellised and tied up, so I cut them off, and now some of them seem to want to make a nice growth. I next planted seedling peach-trees, intending to bud when they got larger, and these, too, seem to want more fussing with than seedlings that volunteer to come up among grass and weeds. However, there is an elm, a honey-locust, and a cedar tree in the apiary which we left when preparing the grounds. Now, during the cool rainy spell we have been having for some weeks up to within a few days ago, the bees in the hives exposed to the sun would soon come out and get to work when he deigned to shine a few hours; while those in the shade would not get warmed enough to bring them out of the hives. I don't believe I care much whether those peach-trees grow or not. White clover is immense, as well as alsike and common red, and the bees are booming.

S. E. MILLER.

Bluffton, Mo., May 24.

I have been trying to find some fault with your plan, but I give it up. The more I examine into it, the more I am convinced that it is a good one, where economy of space and lawn-mower convenience is desirable. Whether better than Mr. Hatch's, I can not say. Instead of making each group 8 feet or more apart, as you have marked in your diagram, I would have them about twice that. Then I would have the hives 18 inches apart, so as to give plenty of room for a lawn-mower. Where hives are in groups 6 inches apart, long timothy grass will grow up, as we find by experience, and interfere greatly with the operations over the hives. Of course, you can cut it out after a fashion; but as neither lawn-mower nor sickle would be available, it will be necessary to hack it down with a case-knife, cutting a few spears of grass at a time. Well, then, if the groups are 16 feet apart, and each hive in the group is about 18 inches apart, an apiary of 80 colonies may cover about 70 feet square, if L. hives are used. It could be very easily accommodated in the back yard of an ordinary half-acre town lot, with a frontage of, say, 80 feet. With this arrangement of distances, a bee from the entrance at A, say, would have to go 40 feet to the east to find an entrance just like the one to which he belonged; and yet this entrance would be considerably different, after all. The entrance of A is near the west corner of the apiary; and an entrance similarly situated, and 40 feet east, is a little more remote from the opposite corner. Taking it all in all it is hardly possible that a bee *could* make a mistake. Of course, an apiary on this plan might not occupy more than 40 feet square, if the colonies are crowded a little closer together. But space usually is not as valuable as that. Aside from this, it is well ar-

ranged for a lawn-mower. I hope that all who can will give it a test at as early a date as possible. In actual practice there may be some serious objections to it. You will observe that it is friend Hatch's plan, as described on page 374, carried out a little more elaborately.

ERNEST.

THE BLUE AND GREEN APHIS.

SOMETHING ABOUT PLANT-LICE IN GENERAL; KER- OSENE EMULSION AS A REMEDY.

There is a little green louse, or parasite, destroying my apple and plum trees. I send you one dollar to send me something to spray them with. Please send me whatever you know will fix them. What do you spray them with, and how prepared?

Dell, Ore., June 12.

G. J. GRAY.

On receipt of the above we wrote our friend that we did not know any thing that would destroy the insects that were injurious to his trees. We wrote him that we had tried in vain to destroy them on our cabbages, but gave it up. Whenever the emulsion was applied with sufficient thoroughness to destroy the insects it injured the cabbages so much that they did not amount to any thing. That has been my experience for two or three years. Perhaps I should remark that relief came to us in our cabbage-raising, in the shape of a little insect, or bug, looking something like the larva of a potato-beetle. We forwarded samples of these to Prof. Cook, asking him to tell us about our unknown friends. Our readers will notice that he replies to both matters at once:

Friend Root:—I am surprised that you say that the kerosene emulsion will not kill the "blue plant lice" of the cabbage. I have believed, as the result of many trials, that it would, if used thoroughly, kill any plant-lice. To even suggest that those at the "Home of the Honey-bees" are not thorough, would be unpardonable; so you see we are in a dilemma. But, did you apply it with a force-pump so that you surely brought the liquid in contact with every louse on the plants? If so, and the lice were not killed, then you have tougher lice in Ohio than we have in Michigan. Please make the emulsion as I recommend in Bulletin 58, and apply with a force-pump very thoroughly, and write me the results.

Anent this subject of plant-lice, let me say that if G. J. Gray, Dell, Oregon, will thoroughly spray his trees with the kerosene emulsion, he will surely destroy his enemies. I have often done this, and have recommended it to others who have used it with entire satisfaction, and have thanked me heartily for the suggestion. It is specially desirable in case of young trees or nursery stock, to destroy the insects, unless, as is often the case, their natural enemies do it for us.

And this leads me to speak of the little helpers that have come to your aid in rescuing your cabbages from destruction. Of course, friend Root, you know the little lady-bird beetles "when to manhood grown," though you do not know the babies. The two insects you sent were the grubs or larvæ (Fig. 1) of one of our common lady-bird beetles. The grub, or larva, is elongated, much like the potato-beetle, only more so, is black, mark-

ed with orange or yellow, and is found very common at this season on plants in company with ants and plant-lice. The ants are there to sip up the nectar from the lice, the lady-bird beetles to take lice, nectar, and all. Both the grubs and the mature beetles feed extensively on the lice, and thus prevail mightily against this small but terrible pest. When the box arrived, one of the grubs had assumed the mature form. I hope you did or will box one or two, feed them liberally with lice, and thus get a better introduction than any description can give you; for you may well say, "I wish to give them a hearty thank-you."

Some of these beetles—indeed, nearly all—are yellow or orange (Fig. 1), spotted with black; hence such significant names as *maculata*, *9-notata*, *12-punctata*, etc. Others (Fig. 2) are plain yellow on the wing-covers, while one small species, very common here and very useful, is black, with two orange spots, one on each wing-cover (Fig. 3). All are short and broad, or rounded, in outline. Fig. 1 shows the larva, pupa, and imago, or mature beetle. As will be seen, the pupa is very small compared to the larva and beetle. This is true of all the lady-birds. The short lines beside the figures give the true size. Hardly a day passes that I do not see these insects feasting on plant-lice. They eat as though they greatly relished the food. I almost fancy that I can hear them smack their lips as they suck dry the fat, full-fed lice.

You may well feel to thank these and thousands of other insects that work in a similar way for us, asking no wages, and truly boarding themselves. Without these helpers, our injurious insects would prevail. Agriculture would be a hopeless industry, and our earth soon a desert waste. How wonderful is this balance in nature! Everywhere there is a limit set to accomplishment; everywhere the "fittest succeed." Everywhere success comes only with struggle and effort. How can any one study in this grand book of nature, without becoming charmed with the grand scheme of creation, and reverent as he contemplates the great Planner? Though his "ways are past finding out," we see enough to thrill us with admiration and love.

A. J. COOK.

Agri-cultural College, Mich., July 2.

Friend C., I really beg pardon. I knew the lady bug, as we call it, but I did not recognize the larva. As the blue aphid has entirely disappeared from our cabbages, I presume it has come about through the agency of these insects. A couple of years ago we tried every thing for the blue aphid on our cabbages and turnips that has been recommended through the papers. Some of the remedies disturbed them a little if we took pains enough; but even then, the remedy injured the cabbage more or less; and even if it had been a perfect cure, the time spent and the cost of the material amounted to somewhat more than the value of the cabbages. Perhaps a little instruction in the matter might help us to do better.

HIVE-COVERS.

APICULTURAL NOMENCLATURE.

I SHOULD like to add my experience to the hive-cover controversy. My hives are a simple box nailed together to hold the frames, cleated at the ends. Covers and bottoms are alike—simply a plain board cleated at the ends similar to Dr. Miller's, only the cleats are made of $1\frac{1}{4}$ -in. stuff, and rabbeted $\frac{1}{2} \times \frac{1}{2}$ in., and nailed both ways—that is, through the cleat into the end of cover and through the cover into the cleat. I have used such hives and covers for about 12 years, and I am well pleased with them. I paint both sides of covers and bottoms. The cause of a cover warping is the swelling of the under side from absorption of moisture and the shrinking of the top through evaporation. Painting does away with a good deal of this, and the rabbeted cleat the remainder.

I was much interested in Dr. Miller's article on the above caption, but your answer to the question, "What is an apiary?" though it may be good Webster, does not seem to me to cover the ground, or, rather, it covers *too much ground*. If an apiary is a place where bees are kept, then what is an apiarian? A man who takes care of a place where bees are kept? Again, we often hear the expression, "Moving an apiary." Now, we can not move the *place* where bees are kept unless they are kept in a house and the house is moved. And in connection with this I should like to call attention to the fact that the names of some of our forest-trees that produce honey are often misquoted. For instance, the poplar is often called by the names of "whitewood," "tulip-tree," etc. and you, Mr. Editor, seem to think that poplar and quaking aspen are one and the same. Again, the cottonwood is often called whitewood, which would lead some to think it the same as poplar. Now, my experience is that these are all different trees except the tulip-tree, which I believe to be the same as poplar, and so called on account of the blossom resembling a tulip. The name whitewood has simply been used because that is the color of the wood of all these different trees. The cottonwood, balm of Gilead, and quaking aspen, are all different trees, though very nearly allied to each other. The poplar is of another and distinct type. It yields honey in great profusion some seasons, while the other three yield nothing, to my knowledge, but propolis and pollen.

BRACE-COMBS.

Dr. Miller suggests that, in experimenting with thick top-bars, tin strips be tacked on each side of the top-bars to increase the thickness. Now, may it not be *possible* that the doctor's suggestion will bring forth fruit not dreamed of? Is it not a fact that bees are a great deal more inclined to stick wax to wood than they are to tin? Again, what harm (or good either) would it do if these same strips of tin were raised up $\frac{1}{4}$ in. above the frame (instead of even) and perforated same as the excluders? This is merely a suggestion. No charge for postage and packing. I give it free.

Santa Paula, Cal., Feb. 19.

R. TOUCHTON.

Friend T., I did not mean to say that the poplar and the quaking aspen *were* one and the same thing, but that in our locality the tree is called by both names, while in the South our whitewood, or tulip, is called poplar. I do not know how we can straighten up this confusion in the names of trees.

OUR QUESTION-BOX,

With Replies from our best Authorities on Bees.

All queries sent in for this department should be briefly stated, and free from any possible ambiguity. The question or questions should be written upon a separate slip of paper, and marked, "For Our Question-Box."

QUESTION 164.—*What width do you prefer for top-bars? For bottom-bars?*

1, 2. $\frac{3}{8}$ inch.

Wisconsin. S. W.

S. I. FREEBORN.

1, 2. $\frac{3}{8}$ of an inch.

Michigan. C.

A. J. COOK.

$\frac{3}{8}$ all around.

Illinois.

MRS. L. HARRISON.

1, 2. $\frac{3}{8}$ inch.

Illinois. N. W.

DADANT & SON.

I have always used them $\frac{3}{8}$ of an inch wide.

Ohio. N. W.

A. B. MASON.

Not wider than worker-brood comb. 2. If any different, narrower.

New York. C.

P. H. ELWOOD.

We make all of our frames out of $\frac{3}{8} \times \frac{3}{8}$ pine lumber—tops, sides, and bottoms all the same.

Wisconsin. S. W.

E. FRANCE.

One inch. 2. $\frac{3}{8}$ inch. After experimenting for years I adopted the above, and have no desire to change, at present at least.

New York. C.

G. M. DOOLITTLE.

Not wider than $\frac{3}{8}$ in any case, nor narrower than $\frac{3}{8}$; bottom-bars the same, so far as width is concerned.

Michigan. S. W.

JAMES HEDDON.

One inch, I suppose, because I have always used that width. 2. $\frac{3}{8}$; I have tried $\frac{1}{2}$, but that is too narrow, as the bees build comb around and under them.

Vermont. N. W.

A. E. MANUM.

Our top-bars are of inch stuff, running down to a beveled edge. Our bottom-bars of frames are $\frac{3}{8}$ inch wide, just the size of worker-combs—the best size for the prevention of brace-combs.

Ohio. S. W.

C. F. MUTH.

One inch, both for ease in manipulating frames and uncapping honey, although in this county the uniform width is $\frac{3}{8}$, being more convenient for the planing-mill men in cutting them from scraps in making hives. 2. $\frac{3}{8}$ inch.

California. S. W.

R. WILKIN.

I keep my preference for $\frac{3}{8}$ -inch bars until some other style of bar is proven a sure remedy for brace-combs. Then, if the desirable thing is not too awkward, I may adopt it. 2. Bottom-bars might be as narrow as $\frac{3}{8}$ if there were any object in having them different from the tops.

Ohio. N. W.

E. E. HASTY.

I have always used $\frac{3}{8}$ for both top and bottom. I find a wider top or bottom interferes with uncapping when the extractor is used. The wide top and bottom bar becomes a still further nuisance in this respect when closed-end bars are used. A spoon-shaped uncapping-knife would have to be used.

New York. E.

RAMBLER.

Such a width that, when properly spaced, there will be between the top-bars just a bee-space and no more. 2. A little less than the top-bars, in order to give the bees free passageway between them. I see nothing practical in being very nice about the width of bottom-bars unless we have some means of spacing them uniformly.

Ohio. N. W.

H. R. BOARDMAN.

1, 2. I do not know. I have always used them $\frac{3}{8}$ wide. I do not want them much less, and I am not sure that I want them wider. I am going to try 500 frames this season with top and bottom bars an inch wide. This is for brood-frames at fixed distances. For the ordinary hanging-frame I am very sure I should not want them wider than $\frac{3}{8}$. My frames for extracting are wider, but combs are thicker—7 in $11\frac{3}{8}$ inches.

Illinois. N. C.

J. A. GREEN.

1. That width which will allow $\frac{1}{8}$ of an inch between them. If $1\frac{1}{8}$ is the proper distance from center to center, then I believe top-bars should be $1\frac{1}{8}$ wide. 2. I should want bottom-bars just as wide as top-bars, if they would stay at regular distances apart. But with the ordinary hanging frame, if you look under the bottom-bars you will see they have a way of getting together and spreading apart, so that, to keep them from being glued together, they must not be more than $\frac{3}{8}$ wide. Even at that width mine are too often glued together.

Illinois. N.

C. C. MILLER.

I am a little surprised to find the testimony so universal for $\frac{3}{8}$; but, dear friends, is it not a good deal because we have used the $\frac{3}{8}$ so long, and have not tried anything else? Dr. Miller makes a suggestion which I wish to emphasize. If your hives have movable bottoms, just take a look some time and see how the bottom-bars are spaced—I mean after you have put the top-bars in very good shape. By tipping the hive back from the bottom-board you can get a glimpse of the bottom-bars. Now, whenever I have looked at them it has seemed to me a little unfortunate that we should leave things in such shape, and expect the bees to manage all right with all sorts of distances, and combs even sticking together at their lower edges.

NOTES AND QUERIES.

We solicit for this department short items and questions of a practical nature; but all QUESTIONS, if accompanied by other matter, must be put upon a SEPARATE slip of paper with name and address.

ROYAL GLUE FOR LABELS ON TIN.

If you will use "Royal glue" for sticking labels on cans and pails, I think they will stay. I don't have any trouble in making them stick with it.

Washington, Ind., May 3.

MRS. S. D. COX.

EVERY THING SEEMS TO YIELD HONEY.

The past ten days have been good bee-weather, and bees are just booming here. All the little apiaries are increasing 100 and 200 per cent. My own is not swarming so much, but working in sections, and it looks as though I should have cases filled and capped by July 4—unusual here. Every thing seems to yield honey.

A. A. LEWIS.

Waterbury, Vt., June 24.

A GOOD FLOW.

I must have a great many more sections if the flow of honey continues as for the last three weeks. Swarming weather, hot and wet. J. BAGLEY.
Serena, Ill., June 28.

COLONIES IN THE OPEN AIR.

A few years ago a neighbor of mine, an old bee-hunter, found one on a poplar, on the outside, under a short bend, that I think had about 50 or 60 lbs. of honey. C. R. RUTH.
Elmsport, Pa.

CHAFF HIVES.

Is there anything ahead of the chaff hive, described in A B C of 1879? GEO. F. KNAPP.
Springport, Mich., June 11, 1890.

[That is a question we can not answer. Our chaff hive has given splendid results in wintering. It is not as portable as the smaller hives, nor as handy to use. A. I. Root uses the chaff hive, and prefers it to anything else for a general-purpose hive; although at the same time he would always have Dovetailed hives, or Simplicity, to use in connection with the chaff hives.]

A FATAL STING.

One of my neighbors, Samuel McAdams, was stung on the neck by a bee last week and died in 20 minutes. FRANK BUTLER.
Carrollton, Ill., June 30, 1890.

[This is a sad record, friend B.; but please let us remember that, if somebody should call for instances where people have been killed by horses or cattle, there would be a hundred or more such cases where we find one who has been killed by bees.]

THE SEASON IN ILLINOIS.

The season here is very poor so far for white honey. The fields are white with clover, and the basswood is in bloom, yet the bees are idly lying out with the foundation in cases scarcely touched in many cases. I do not now think we shall have one-fourth of a crop of white honey. Similar reports come from all directions. C. H. DIBBERN.
Milan, Ill., July 1, 1890.

IMPROVING POOR HONEY.

I have honey that I have kept in an open-mouthed vessel for two years, and it is still foamy. What can I do with it? GEO. GOULD.

Villa Ridge, Ill., July 7.

[You do not tell us whether the honey is good quality. Probably not. Sometimes, in such cases, running off the liquid portion and then melting the candied part will give you very nice honey—that is, from the candied part.]

HEADS OF GRAIN

FROM DIFFERENT FIELDS.

SECTIONS NOT SOLD BY WEIGHT, BUT BY THE PIECE.

If you will permit, I should like to correct the impression you seem to have, that honey is invariably sold by weight. According to your reply to friend E. C. Newell, one would suppose you certainly had overlooked the truth in this matter. Mr. Newell is correct in his statement, page 464, that grocerymen invariably refuse to buy or sell any other way than by the piece, especially after their first years' selling of section honey. Neither, as Mr. Newell says, will they allow you any thing for extra weight. This thing I have thoroughly tested in our local market. My groceryman suggested to

me to have my sections made at least $\frac{1}{4}$ inch narrower, as I was losing from 2 to 3 ounces on each section this part of the season, and he couldn't help it. Mr. Newell says he strongly objects to your statements in this matter, and your reply will still surprise—yes, grieve him, to think you are so out of it, and at the same time ignore, apparently, all that he has invariably found to be the case. Please let Mr. Newell have the satisfaction of knowing there is at least one who indorses his statement; and, if I am not greatly mistaken, others by the score are ready to do the same.

I want my sections hereafter $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{8}$, in place of $1\frac{1}{8}$, then there will be no possibility of so much overfilling. I should like to hear the views of others on this matter. I am aware that, in the fall, when our crates begin to have light weight, grocers would rather take in by weighing. But my understanding is, no reduction the season through.

Pine Grove, O., June 24, 1890. S. DANIELS.

That is right, friend D.; give us the facts, no matter whom it hits. If sections of honey are sold in many places for so much apiece, we certainly ought to know it.

A HONEY-WELL; A MAN BORES INTO A BLUFF, AND SECURES THE SWEET ARTICLE BY THE BARREL.

The heading as above, together with the following, appears in the *Cleveland Leader* for June 27:

LOUISVILLE, Ky., June 27.—A successful boring for honey has been made in North Tennessee. For many years swarms of bees have been noticed by boatmen at Fox Bluff, on the Cumberland River near Franklin, Ky. The bluff is 170 feet high, and the river's channel runs directly under it. The bees have been observed about a big fissure near the center of the bluff, and the opening could not be reached from above or below without great danger of being stung to death. As the bees had never been robbed it was believed a large amount of honey was stored in the cliff. Secretly a well-borer named Staks visited the bluff, and was at once impressed with the idea that he could reach the wonderful honey-storehouse with his drill. After some coaxing he persuaded a number of farmers to undergo the expense, and a three-inch hole was bored from the top of the bluff. At a depth of 85 feet the drill struck the honey. Barrels and tubs by the score were filled and carried off to neighboring farms, and the syndicate has sent to Louisville for more receptacles.

It seems a shame to give space to any such silly statement as the above, and we would not do it were it not that, whenever some newspaper reporter manufactures such a yarn, it comes to us right and left. Oil and gas may come out of a hole drilled in a rock, but not honey.

PUTTING YEAST INTO HONEY TO KILL OFF NEIGHBORS' BEES.

Last spring I had 10 colonies (hybrids), and they increased to 40 by fall, besides giving me considerable honey. I wintered them indoors; placed them in tiers against the end of a building, and packed them in straw. Most of them lived till spring, but have dwindled away since, except five colonies, and they are not in the best condition. I wintered them the same way the two previous winters, without any loss. A neighbor had some trouble with robbers. He closed his hives and left a hive of honey, without bees, open, pouring yeast into the honey (so it is claimed). My bees, of course, went there. Is it possible that that has been the cause of the disaster? Will it be safe to give the same

hives to new swarms, there being considerable honey left in most of them?

WHAT DO THE COURTS DECIDE ON THE MATTER OF DESTROYING BEES WITH POISONED HONEY?

Has it been tested in courts whether people have a right to destroy bees, and endanger consumers of honey that way? If it would not be too much trouble, I wish you would reply to this in GLEANINGS.

A. HENNINGS.

Alabama, Wis., June 3.

Friend H., this story about feeding bees yeast in their honey is very old. I do not believe it was that that killed your bees; but I am inclined to think, from what you say, that they had the spring dwindling. I do not know that the matter has ever been tested in regard to poisoning bees; but it certainly would be a very clear case, for our laws are very severe on any one who wilfully poisons domestic animals of any sort.

WIDER ENTRANCE FOR THE CHAFF HIVE.

I see by GLEANINGS you have abandoned the 8-inch entrance to chaff hives, and adopted the full width. If you will jog your memory I think you will find I was one of the first if not the first to insist upon full-width entrances to chaff hives, both one-story and two-story. If you please I should like to insist upon another improvement. There will not be any more demand for brood-frames with top-bars $\frac{3}{4}$ wide. Many of us think $1\frac{1}{2}$ too wide. Many of us wish to continue the use of metal corners. It is hard to use all-wood frames and be a Christian at the same time. I want to use metal-cornered wired brood-frames with top-bars one inch wide and $\frac{3}{4}$ thick, wired as you have been wiring them, with tin bar in the middle.

Bonney, Pa., June 20, 1890 PHILLO S. DILWORTH.

Yes, you did suggest making a wider entrance; and from what you and one or two others said, together with our own convictions in the matter, we commenced this spring to make them full width of the brood-chamber. There is no reason, if single-walled hives have the full-width entrance, why the chaff hive should not. Don't be too positive that there will be no more demand for a narrow top-bar $\frac{3}{4}$ inch wide. The *tendency* of the times *looks* that way.

THICK TOP-BARS: RUSHING AFTER NEW THINGS AT DAMAGE.

I have just read in GLEANINGS, page 182, "It is a serious matter to lumber our homes and our apiaries with things that may, after a little while, be discarded as useless for the purpose for which they were recommended." Now, I will venture a prophecy. The wide and *thick* top-bars that you are just now booming so vehemently will turn out just as stated above. They will soon be regarded as an intolerable nuisance, then away they go, and what a time there will be to get the combs out and fit them into other frames! Top-bars one inch wide and $\frac{3}{4}$ thick, properly spaced, will prevent brace-combs as effectually as one inch or $\frac{3}{4}$ thick. I know whereof I speak. I saw it tried; but there are objections to wide top-bars, that make me extremely reluctant to go back to them. I have not used a honey-board since I discarded the old Langstroth style of hive, and I am satisfied in my mind that I never shall. My hive is so constructed that a super of the same length and width is just right for 32 one-pound sec-

tions $1\frac{1}{2}$ wide without separators, and leaving room to slip in a $\frac{3}{4}$ board on one side as a clamp. I then place two strips 7 in. wide, of painted cloth, between the sections and the brood-frames, and that does the business to my satisfaction. The making of frames an inch or $1\frac{1}{2}$ involves quite an extra expense over frames just $\frac{3}{4}$ wide. In most places suitable lumber can not be had without special order for the purpose, and that at once involves an extra price, to say nothing of the extra quantity.

G. B. REPLOGLE.

Centerville, Iowa, Mar. 12, 1890.

What you say regarding thick top-bars *may* be true; but if we reject every thing new *because* new, apiculture would be at a standstill. On such a basis the world would never have had a sewing-machine or a steam-engine, and you possibly might have been plodding along without movable frames. No, friend R., it is worth our while to properly examine into the merits or demerits of the new, and then use a little discrimination. Have we not urged, in almost every number of the journal, to go slow and try a few, and, if the few justified trying more, try more? If you will turn to our catalogue you will see that we sell thick-top-bar frames for the *same* price as the thin ones. There is more lumber in the former, but they are more cheaply made. Thin top-bars are quite liable to sag, but the thick ones will hardly be affected by the weight of combs. Top-bars $1\frac{1}{2}$ inch, properly spaced, will not prevent burr-combs with us.

E. R.

THE DOVETAILED HIVE AND KEENEY'S WIRING.

The Dovetailed hive is very neat, and I shall like it better after using a while. I am not sure about the slatted honey-board. I put in the nine slats and placed them even. Before the super is put on I find the bees will bridge their frames to the cover. That may be because the frames have already been plentifully bridged on top when used in other hives where I use a cloth. But I scraped the top-bars as well as I could before putting in the frames. I find it necessary to put on the enamel cloth. The new plan of wiring frames, introduced by E. D. Keeney, I have tried with improvements suggested by Ernest; foundation only four inches deep, and stick one edge into the slot that was made for comb-guide. It works wonderfully well.

Hopkinsville, Ky., June 9.

D. F. SAVAGE.

NOT AGAINST PERFORATED ZINC.

Spring opened with bees in good condition. I did not lose a single colony until April. A neighbor asked me to assist him in overhauling his 30 colonies, when we found 9 dead. I told him of my success in wintering, not having lost a colony in 7 years, the entire period I had owned bees. But after a week's rain I told him a different tale. I had lost 8 colonies out of 18. But after the weather settled, the little fellows went to work in earnest; and up to June 14th I had taken 522 lbs. of as fine clover honey as one could wish. I will add, also, that my hives with perforated honey-boards did much better than those with wooden ones. At this date the honey-flow is about over, as we have little else here besides clover that yields honey sufficiently to store in supers.

E. W. STAYTON.

Bowling Green, Ky., June 21.

The statement has been made, that per-

forated zinc diminishes the amount of honey stored in the supers. The testimony above doesn't point that way. Bees will store honey just as well above perforated zinc as they will without any.

ANSWERS TO QUESTIONS; WAGES FOR EXTRACTING, ETC.

1. One of my old hives has plenty of bees, but had little brood, compared with others during the honey flow, and they stored no surplus at all. Is the queen too old? or what is the cause?

2. If a man goes out extracting for other beekeepers, what is the usual compensation? Do you think 5 lbs. per hive too much? or would it be more just to take a certain percentage?

3. I want to establish an out-apiary next year, with a party who keeps about 6 to 10 hives himself. He wants 5 lbs. of honey for every hive of mine, and is willing to give me 5 lbs. for every hive of his for the care of his, both parties keeping their own increase, if any. Is this arrangement just? If you think the answer to these questions will interest others, you may publish the same.

Olmdsted, June 26.

M. R. KUEHNE.

1. Queens during or just before swarming time very often stop or diminish laying temporarily. After the swarming season, or after the colony has swarmed to a new location, the queen will commence in good earnest.

2. About \$2.00 or \$2.50 per day ought to be fair wages for extracting, the person proposing to do the extracting furnishing the extractor. Five pounds per hive would be pretty big wages.

3. The arrangement proposed would hardly be fair. Suppose you owned, at the out-apiary, 100 colonies, and the other party owned 10. You would have to give him 500 lbs., and he would give you in return but 50.

PROSPECTS POOR FOR THE LOCALITY OF E. FRANCE.

Mr. Root:—When you were having your rainy weather in Ohio we had a three-weeks' drouth. Now we are having rain and floods—rain, rain, rain. Cornfields are green with weeds. White clover is scarce—that is, old enough to blossom. I was at one of our bee-yards the 19th, and could put all the clover blossoms that I saw for five miles, into a peck measure. But the young clover is thick all over the ground; but that won't blossom this year. Bees have had a hard time to make a living for the past three weeks. We went through one yard yesterday. I don't think they had, on an average, one pound of honey per colony, and many did not have enough for supper—not a bit of new comb built yet. Basswood looks promising.

E. FRANCE.

Platteville, Wis., June 21, 1890.

WHY THE BEES DWINDLE.

I should like to ask you for a little advice. I bought me a swarm of bees one year ago this spring. Last season was a bad one for honey. The bees filled the hive full of comb, but did not make enough honey to last them through, so I fed them all winter when the weather was warm enough. This spring the bees were in good condition, and plenty of them; but for some cause they have dropped off, and I don't think there are fifty bees in the hive. I have watched them closely, and I don't think there have been any moths near them, but I think they grow less from day to day. Will

you please advise me in regard to the matter? I should like to raise bees if I can make a success.

New Haven, Ct., June 26.

E. W. EASTER.

From your letter we gather that the colony you mention was queenless, and of course they would then dwindle down to mere nothing just as you state. The colony is now probably too far gone to help matters any by giving them a queen. You could very easily make another start by buying a two-frame nucleus and an untested queen. These if the hive is Langstroth size could be put right into the hive where the bees died, and in a very short time you would again have a good colony of Italians for the next winter. If your hive does not use the regular L. frame you had better purchase a pound of bees and a queen.

WHY DID THE QUEENS STOP LAYING DURING THE HONEY-SEASON?

I should like to ask you a question in relation to my bees, and, in fact, all the bees in this place. They are dying a natural death, for the queens have not laid an egg for six weeks; and what the cause is I don't know. It is not for the want of stores or honey-flow, for there have been hundreds of acres of alfalfa in bloom of late, and the weather is not unfavorable.

ANOTHER POISONOUS HONEY-PLANT.

The bees worked well for a couple of months since, on a weed that is called loco. Now, that same weed is very poisonous to horses when they eat it, and also to cows. It is not always fatal, but they get crazy. Is there any thing in the flower that will prevent queens from laying? While the bees worked on it the queens were laying, and colonies increasing; but when the loco stopped blooming the queens stopped laying, and consequently the bees are dwindling down to nothing. Have you ever heard of a similar case? There has been loco here every year since we started bees here four years ago.

JAMES CHRISTIANSON.

St. Johns, Ariz., July 1.

Friend C., it seems to me you have answered your own question; namely, the weather was not favorable. Queens will not lay, as a rule, unless honey is coming into the hive; and no matter if there are hundreds and thousands of acres of blossoms, there are times when there may not be a drop of honey for the bees to get.—Perhaps Prof. Cook can tell us something about the poisonous honey-plant you mention. I do not remember to have heard of it before. Even though all you say be true, I hardly think the honey is poisonous or has any thing to do with the non-laying of the queens.

A QUEEN OUT FOR A PLAYSPELL.

I received the queen in fine condition, and she is now doing finely. She commenced laying the second day after being received, and has filled three frames of eggs. I introduced her as per directions, and as I took a frame from the hive I stepped over to arrange frames, and see all was right; and on coming back in about fifteen minutes (I don't think the time to be any more) my new queen was poisoning at the entrance of the hive, taking her bearings very carefully. I dropped to the well-known position of a bee-hunter, to keep her against the horizon, and had the pleasure of seeing her majesty

have a fine frolic. Her circles included about two acres; and as she cut the air it was fine music to hear. In about ten minutes she returned, as nice as a veteran worker. After I found her laying I clipped her wing. All is well that ends well. I took a look at the cage and found three cells completely torn down. I think she liberated herself very quick. I lost my first queen about twelve days before I ordered this one. The most probable cause, I think, was, she took a flight and was caught by a bee-bird, as I have shot 25, and examination proved they really catch my bees.

Vine Creek, Kan., July 2. WM. H. DODGE.

Friend D., you have struck upon something that was fully discussed some years ago, and called forth considerable comment and some anxiety. You say a fertile queen took wing, to the extent of flying over perhaps a couple of acres. In your case she did not meet a drone. May be a queen that has once laid worker eggs never meets a drone afterward; and I believe that is the general rule in teaching. But for all that, I am sure I did see one queen, that we imported from Italy, take wing just as yours did. I do not know what she took wing for, nor just how long she was gone, for I only saw her returning. We have other testimony that seems to indicate quite strongly that queens, after meeting the drones once, fly out one or more times after this meeting.

ARE BEES ASSESSED AS PROPERTY?

I should like to know whether bees are assessed in your State or not, or in any other State that you know of. The county officers wanted the assessor to assess them. I told him they were not assessable unless there was a State law to assess them. He thought I was right. He wanted me to write and see if they were assessed in other States.

JAS. R. WHIPPS.

Le Sueur Center, Minn., June 18, 1890.

I do not know what the prevailing custom is; but I think bees should be assessed with other property. In fact, if the assessor should pass by my bees I should feel slighted. If hives of bees are not property, then we had better all of us quit the bee-business. This matter has been up before, and there was some discussion on it some years ago. I do not want any thing from my neighbors unless it justly belongs to me; neither do I want any thing nor any privilege from the government of the United States unless it is fairly mine. Of course, I agree that there are things of so little use, or of a value so uncertain, that it is not worth while to tax them. If your bees and fixtures would not sell at public sale, then I should say they were not worth taxing. As hives of bees do, however, sell for something with other stock, this customary selling price, it would seem to me, should be the proper value for taxation.

WHY BEES SWARM OUT, ETC.

Can you give me any reason why a new swarm will settle in a new hive, and remain a few days, and then start out and leave the hive? Also, why a new swarm will enter an old hive where there is a good working colony already in it, and remain in it, and apparently work with perfect harmony? I had such a case the other day. Is it not advisable for a

very strong colony to have as many as four or five supers placed upon the hive at once for ample room to work in?

C. W. YOUNGMAN.

St. Paul, Minn., June 21, 1890.

The matter you mention is fully discussed under the head of "Absconding," in the A B C book. Absconding swarms often try to force an entrance into any sort of hive—one containing bees or one without. Sometimes the colony occupying the hive will receive them peaceably, and sometimes they will not. I would place enough supers on a strong colony to give them all the room to work, but not too many at once.

QUEENS FAILING TO HATCH BECAUSE WRONG END UP.

I have been a bee-keeper for seven years, during which time I have had three queen-cells that, having failed to hatch, an examination showed the queens were wrong end up—that is, their heads were turned toward the base of their cells. Is such a thing common? I have read my A B C book, but I don't find that you say anything about such mishaps. The latest one I find I send you by to-day's mail, which has not been removed from the cell; but those that I have examined before, appeared perfectly developed, and I suppose that, if the cell could have been torn open just at the right time, they would have been all right. The one I send you should have hatched a week since. Do worker bees ever turn up that way?

L. HALL.

Sparta, Miss., July 4.

This matter of queens and worker bees being found in cells wrong end to, has been commented on several times through our journals. Sometimes they gnaw out near the base of the cell, and at other times they are found dead in the cells. I do not know where the trouble is, unless friend Doolittle's suggestion hits the point—somebody shook the frame to get the bees off, and the queen wiggled around. If the frame, however, was never removed from the hive, and shaken, I suppose we shall have to admit that nature sometimes makes a blunder.

BURR-COMBS; PREVENTING WITH CROSSWISE SECTIONS.

a. Would sections tend to prevent burr-combs if put on crosswise of the frames? b. Would as much surplus be stored in them crosswise as lengthwise?

Falfa, S. C., June 3.

G. D. MIMS.

I believe as much honey will be stored where the combs in sections are at right angles with those in the brood-frames as by the usual way. I do not believe the burr-comb will be any better, but, on the contrary, rather worse.

QUEEN SENT.

The queen ordered of you June 28th arrived in good condition July 3, and was introduced according to directions July 4th. I looked in the hive to-day, and found her released and all right. Thanks for your promptness in filling orders. She was darker than I expected to see, but, of course, she is all right. This is the first one I ever saw; but I supposed they were very bright, like the workers.

The honey-flow is about over here, and has been very poor indeed. I notice reports in GLEANINGS from apiarists, that vary from 50 to 200 lbs. per colony. Now, I should just like to have you tell

me how to do this. I am very much interested in bees. I like to work with them, and am very fond of the honey. We think that 50 lbs. per colony is a big yield. We have no artificial pasturage, except a little buckwheat. There are a few colonies upon almost every farm, but nearly all are blacks, and in box gums. The owners seem to think these boxes as good as any movable-comb hive. That corn you sent me in the spring is fine for early use. I shall save seed from it. C. C. POLK.

Bradford, Ala., July 5.

OUR OWN APIARY.

CONDUCTED BY ERNEST R. ROOT.

THE HONEY YIELD.

For the last few days we have had an unusually heavy yield of nectar. The busy toilers have been coming in and dropping on the entrance by the score. At night the whole apiary has been one continual roar, and the fragrance of newly gathered honey is as apparent to the nose as the roar is to the ears. If this state of affairs should be general, and continue, there will be a good yield throughout the United States.

Later.—The weather has turned cool and honey has stopped short off, and robbers, especially from the hybrid colonies, are beginning to nose about. When we had hot days and hot nights the flow of nectar seemed to be very heavy; but now, the 11th, none seems to be coming in.

THE ALLEY DRONE-TRAP.

This year we were obliged to buy a good many colonies, and there were not a few hybrids among this number. As we were rearing queens right along, it would not do to let the half-blood drones have liberty in the air. All undesirable drone brood was uncapped after the hybrid queens had been removed, and then the Alley drone-traps were attached to the entrances. Two or three times the upstairs apartment of the trap was full of drones, that had gone up through the cone, and, being imprisoned, died.

IS THE TRAP A HINDRANCE?

The question has naturally come up as to whether a trap is a hindrance to the workers. For a few days it does disconcert them a little; but after they have become accustomed to it, they pass readily through the zinc. Bees have to learn a little knack in getting through the zinc, and, after having acquired it, they slip through in a twinkling.

There is just one improvement that I would suggest to friend Alley. He has already obviated the difficulty somewhat in his automatic swarming arrangement. The trap is too small. As the perforations can not be any larger, there should be more of them. With the ordinary size of trap, during night, when bees are evaporating honey, a good many of the bees will get around the openings, and very materially retard rapid evaporation. If the night is at all warm, the bees cluster out and cover the trap almost entirely—making the matter

somewhat worse. During the honey-season, bees ought to have the full-width entrance of the hive.

FOUNDATION, AND WHAT DRAWS OUT BEST.

I have been making quite a number of experiments on different kinds of foundation. For the brood-nest, I find that the heavy brood (so styled in our price list), running 5 feet to the pound, gives altogether the best results. The cell-walls in this are heavier, and are circular, leaving a little more wax in the corners of the hexagons. The light brood (7 ft. to the lb.) which we ordinarily use for the wired frames, has a tendency to be wavy on being built out, and on horizontal wiring it would not do at all. Now, may this not account for the difference in the reported results of horizontal wiring as to whether foundation will bow out or not? If heavy brood foundation is used with the horizontal wires, no trouble will be experienced. Even on a perpendicular plan, light brood foundation, when drawn out, has a wavy appearance, because the bees will stretch the cells a little in drawing it out.

KEENEY'S METHOD OF WIRING.

This works very satisfactorily. Even with light brood it does as well as with the perpendicular plan; but with the heavy brood it is just perfect.

THICK TOP-BARS.

They are working very successfully. Burr-combs have been built up above thin top-bars, but the thick ones are free so far. They do not seem to sag very much yet, either.

THE HOFFMAN FRAME.

The modified Hoffman frame, as described recently in GLEANINGS, has been put into the apiary for testing. It certainly has some very desirable features about it, and the bees do not gum them together nearly as bad as one would imagine, and they are in a hybrid colony at that. By the way, is it not a fact that

HYBRIDS ARE WORSE ON ACCOUNT OF PROPOLIS?

We have quite a number of half-bloods that have filled their tin rabbets level full with propolis. With this kind of bees, metal rabbets are no better, nor as good, as the plain wood bearing. I do not know, however, that I have noticed Italians propolize things up in this way. Perhaps this is one of the reasons why the majority of bee-keepers prefer plain wood bearings in preference to tin rests.

HYBRIDS.

Oh dear! I wish there weren't a hybrid in the apiary. It has been several years since we had so many colonies in the yard at once; and during the intervening time we have had almost exclusively Italians. Then we could work a greater part of the time without a veil; but now a veil is an absolute necessity. On hot days, when it is hard enough at best to keep cool, a veil around the head is any thing but pleasant. Perhaps I should remark, that all the hybrid colonies above mentioned had their old

queens removed long ago; but somehow those old black fellows still live, and won't die off, although their old queens were removed something like two months ago. I have felt several times as though I wanted to paddle the whole boodle of them to death, as described in our last issue, in this department, under the head of "cross bees."

CARNIOLANS.

These bees are still doing well. The hive is full, and running over with workers, and we have been giving them empty combs to give them room. Strange enough, these fellows have not attempted to swarm yet. The Carniolans we had last year would have swarmed themselves out of existence with half of these conditions of prosperity.

SPECIAL DEPARTMENT FOR A. I. ROOT, AND HIS FRIENDS WHO LOVE TO RAISE CROPS.

That art on which a thousand millions of men are dependent for their sustenance, and two hundred millions of men expend their daily toil, must be the most important of all—the parent and precursor of all other arts. In every country, then, and at every period, the investigation of the principles on which the rational practice of this art is founded ought to have commanded the principal attention of the greatest minds.

JAMES F. W. JOHNSTON.

GARDENING IN JULY.

ISN'T it fun? I have just come in from the fields, and I have so thoroughly enjoyed the morning that I want to tell you something about it. Just about this time of year, there is very often a scarcity of potatoes. Old ones are all gone, and the stock of new ones is inadequate. Yesterday Mr. Stevens said there was not a potato in town; and after people had been at all the groceries and found none, they came down to me. Men, women, and hotel-keepers came with long faces, to know whether I could possibly give them some potatoes for dinner. Now, you may think it is funny that I should rejoice to see everybody in trouble. Well, you know Uncle Amos did not mean just that. I will tell you why I rejoiced. Away back in the spring we started a lot of Early Puritans and a lot of Early Ohios in the greenhouse. When they were so big that they could not stay in the greenhouse any longer (they were getting so "long legged") they all laughed at me for turning my potatoes out of their warm quarters into the snow and storm and frost. There was not a bit of ground dry enough to work, except some ridges where celery had been dug, that I have told you about. We split the ridges with a plow, and made a pretense of getting mellow dirt for my greenhouse potato-plants. We set them out as best we could, with many misgivings. Some fine weather came on, however, and they turned to a rich thrifty green, and began to do nicely. Then came frosty nights, and we fussed to lay them down and cover them with fine dirt that could not well be found, the ground was so wet; but with a strong plant growing out of a whole potato, even if it does get nipped with frost it soon starts out again. Well, on this 7th day of July there were great masses of foli-

age, and the hard ground that had never been plowed to amount to anything was bursting open with the potatoes underneath. We dug them, such as they were, and people went away happy, even if the potatoes did cost *50 cts. a peck*. I had a little misgiving, for I feared they might not be nice for cooking. But my wife gave us a sample of these for breakfast, that allayed all my misgivings. Early Puritans are just beautiful when cooked as Mrs. Root knows how to cook them, even if they are *not* fully grown. It takes about five hills to make a peck at the present stage of growth. But ten cents a hill (each hill representing a single potato when planted) pays us very well. Of course, we select the most mature-looking hills to dig first. The only thing I felt sorry about is that I did not start *more* potatoes in the greenhouse, and plant them in celery-ridges in just that way. At the same time we planted the potatoes in the greenhouse, we found a strip of ground that would work very nicely by turning under some rye that was about knee-high. We put peas, kidney wax beans, and corn, in this strip. I knew the peas would be all right; but it was so very early for corn and wax beans, I thought I would try only four rows of each. Well, the corn and beans had so many ups and downs, and made such a very poor growth for many weeks, that I thought I had wasted my time and pains; but just now they are yielding beautifully—I mean the beans and peas. The corn will be ready in about a week more. We get *50 cts. a peck* for peas, and *10 cts. a pound* for wax beans; and Mr. Stevens says that he only wishes he had four times as many. We have been getting this price for the peas for at least four weeks, and I should think for over two weeks on the wax beans. Two quite small boys pick all the peas, and two more pick the wax beans. I have now got these boys taught so they pick only peas that are just right—none of them "too thin," neither do they let any get too hard. I have also taught them so as, with my assistance, to keep just enough ahead for the demand, and no more, so our customers get them just freshly picked. The wagon leaves here at six in the morning, and then comes around for a fresh supply again at nine. So our small boys pick late in the evening, just what is wanted to start out with in the morning. Then early in the morning, before it gets real hot, they get just enough for the wagon when it gets around at nine. About this time they are tired enough to stop and rest, and by three or four in the afternoon they are all ready for work again. Our berries are picked in much the same way. There is nothing like being able to tell your customers that the peas, beans, berries, etc., have just been picked within an hour, or two hours at the furthest. We have a good careful man to look after the boys, to see that they do not get to playing, nor eating their berries, and then I get around among them three or four times a day. I tell you, I just enjoy gathering up the stuff. Besides the trade on the wagon, we sell quite a little stuff at a sort of berry-stand between our lunch-room and

counter-store. This is where we display and sell our honey also. Well, it is my privilege to gather up tempting things from the fields, and make a little display of them on this berry-stand. As we have unexpected calls for all sorts of stuff at all hours of the day, we find it exceedingly convenient to scatter baskets all over our grounds. When we have new comers, I find it a hard matter to keep them from carrying the baskets up to the toolhouse, especially nights. These market-baskets (peck, half-peck, and half-bushel) cost only 30 or 40 cts. a dozen; and it does not pay to carry them in nights, not even when it rains. Very often we have a sudden order for something to meet the trains, especially at this time of year when picnics and excursions are in vogue. If baskets are in the field, I can call from the office window to Mr. Weed, whose place is in the plant garden, and he can go to the top of the hill and call to the boys to bring up what is needed, providing baskets are where they can grab them up quickly, and set them at work. Now, when I take my morning walks, I take a basket of suitable size and gather up what peas are picked. Then I fill another with string beans from where they are picking; a third one with new potatoes; a fourth with black and red raspberries; maybe a fifth with currants and gooseberries. By this time I am ready to look for a wheelbarrow. By the way, we have wheelbarrows scattered over the premises almost as plentifully as baskets. I think there are seven altogether. When I get more samples than I can carry I call to some one to meet me with a wheelbarrow.

Now, when the boys bring the stuff in from the fields, they just dump it down in all sorts of disorder. I can not teach anybody (at least I have not succeeded so far) to fix up a display of fruits and vegetables as I fix them up. First, I dispose of all partly filled baskets, by selecting a basket of proper size, so each one will be heaping full. "Heaping full" means good measure, and then you know what the Bible says about good measure. Then I put all the currants by themselves, all the raspberries, gooseberries, peas, wax beans, giving the berries the most prominence, peas and beans next, setting the potatoes on a box or stool a little lower. Before I get things fixed, a lively trade starts up, and my display is very soon disordered. When I can be spared, however, I just enjoy seeing things go off; and before any thing is out, some of the small boys that are almost always standing around (feeling sure by past experience that I have work for them) are ready to go to the fields and bring in a fresh supply. By the way, this year we are employing quite a number of little chaps at only *two cents an hour*. Mr. Weed and the time clerk concluded that they would be worth that much, even if they did play a good deal. Well, I really enjoy teaching these "two-cent" little fellows how to work and how to do business. There is a full understanding between us, that, when they prefer to be their own bosses—that is, to be free from any obligations—they can be off from duty by simply

marking their time off on the slate. There is a small slate on purpose for them, separate from that used by the big men and women. Sometimes when I ask them to do something they reply, "Why, Mr. Root, I am not at work just now; but if it is some little thing you want done, I will do it, *without charge*."

Just think of the idea of these little fellows working on a salary of two cents an hour, being liberal toward myself, or toward their "boss," who employs toward 200 hands, at an expense of more than \$20.70 an hour! I mentally thank them for the example they set me; and may God help me in a like way to be liberal toward *them*, with *their* small modicum of strength and judgment. Just a few minutes ago I saw one of the younger ones with his berry-basket hitched to his suspenders in such a way that he can pick berries with both hands, instead of picking with one hand and holding the basket with the other. This reminds me that, while in Wisconsin, I saw a sort of tin box to be strapped around the waist, used by friend France's pickers, for picking blackberries. This tin box has no bottom, but it has a funnel-shaped cover. This cover drops the berries in such a way as to spread them over the top of the box, so as to have it nicely rounded. This year our berries are all picked by the hour. We like this better, because we can stop and start as the market demands, set the boys at any moment hoeing or weeding, without marking the time off or on. Besides, I think there is a better feeling among the children—less strife and jealousy—where they have regular wages by the hour. Of course, the rate of wages is gauged by the amount of work. Our strawberries have brought, during this season, from 10 to 15 cents, few if any being sold for less than 10. Raspberries have only once been down to 8 cents, and that was Saturday night. Of course, however, all of our stuff brings a better price because of being freshly gathered and delivered in tempting shape, right at the homes of the consumers. Now, in conclusion, let me say again, "Isn't it fun to be a gardener in the month of July?"

THE OREGON EVERBEARING STRAWBERRY.

Friend Root:—Will you please let us know something about the new everbearing strawberry? I got 12 last fall, and planted them in my greenhouse. They made a nice growth, and are now in my garden, full of handsome berries. They are constantly sending out more fruit-stems, but not a runner appears. I have one plant with not less than eleven fruit-stems, and the berries are fully as large as Jessies. If it is going to keep it up at that rate all summer, I should think that one plant ought to produce half a bushel of berries alone. But how can we multiply them, if they will not send out runners? Pulling the stools apart is the only way I know of; and then the question comes, "Will that not kill them?" and, when is it best to do it?

Port Clinton, Ohio, June 9.

J. JOHANNSEN.

Friend J., we also had about a dozen plants in the greenhouse. They commenced sending out runners just before fruiting, and we have perhaps 40 or 50 young plants.

Like yours, our old ones are still blossoming and sending out fruit-stems. While the fruit is not as large as the Jessie, it is of very fair quality. I, too, have been getting a little excited about this strawberry. But these plants are in very rich plant ground—in fact, nearly half manure, and some other varieties of strawberries under the same circumstances are also blossoming and bearing fruit; and I presume this is caused by the very rich ground they are in, and the continual watering they receive when the celery plants and others adjoining get their heavy waterings every three or four days. In fact, a little patch of Jessies in the greenhouse is still giving us a box of berries every other day, when those in the field ceased bearing more than two weeks ago. Is it not true, that special treatment may make *any* strawberry-plant everbearing? I am sure I can not tell why yours do not send out any runners. The introducer of the plant has an advertisement in this issue, but I do not know his prices. I do not believe that dividing the stools would answer very well.

ANOTHER STRAWBERRY REPORT—80 QUARTS FROM
A PIECE OF GROUND 5x82½.

Friend Root:—The strawberry-bed you saw in my yard in Boscobel, the day you arrived there, is 82½ feet long by 5 feet wide. We picked 80 quarts of as fine berries as any one ever saw, from said bed. They are the Jessie and Bubach varieties. The little boy measured one that was 5½ inches around. This bed was only eleven months old when it produced the 80 quarts of berries. You saw this bed a few days after it was set out, it being a very dry time.

BENJ. E. RICE.

Boscobel, Wis., July 2.

Dear friends, here is a hint for you. After your early crops on your garden, manure the ground well, turn it under, then pulverize and work it thoroughly. Be sure to make surface-drains as well as underdrains, so that heavy rains can not beat it down solid, and in only *eleven months* you can have such a yield of fruit as friend Rice speaks of. The sight of the pretty little bed of berries took my eye at once, and I made up my mind then, that, if he *kept* them looking as nice, he would get his reward.

THE IGNOTUM TOMATO IN AUSTRALIA.

From packet received, containing 32 seeds, I was successful in obtaining 20 fine healthy plants, every one of which has proved true to name—at least, not like anything grown here before, save Mikado, from which, I am inclined to think, this is a sport. I say this, because the Mikado was first out here; but if the Ignotum has been, I should call the Mikado a very poor sport from the Ignotum. It is very strong, and hardy in habit. The fruit is very uniform in size and shape, quite smooth, no corrugations. One tomato that I measured and weighed gave the following results. It was the finest one in view at the time. Size, 17 inches around; weight, 22½ ounces. The 20 plants yielded up to date (they are still bearing) 342 lbs. of fruit. If planted like the 20, on similar land, and the conditions the same, the yield would be just 42 tons of fruit per acre.

R. PATTEN.

Binni Aplary, Cowra, Aus., May 31.

EGYPTIAN ONIONS; GROWING TOMATOES IN THE
GREENHOUSE, ETC.

Mr. Root:—Can those Egyptian onions be grown under the greenhouse benches where they will receive little or no sunlight? If so, what time shall we sow the sets to have them fit for market in March and April? Tomatoes bring about a dollar per bushel in this place when they first come into market; but after they become plentiful they are slow sale at 30 and 40 cents. Now, what I wish to know is this: Why can we not have them very early by sowing the seed in a greenhouse in the month of January, or even earlier, and growing them in 6 or 8 inch pots till the middle of May? Will it not pay?

Cokeville, Pa., June 28.

JOHN MAJOR.

Friend M., the Egyptian onions will do exactly what you wish; in fact, I have thought, during this past spring, they do nicer in the shade than anywhere else; that is, they are more white, crisp, and tender. The way we manage is as follows: The little sets, or onions, on top of the stalks, are put in during the present month of July. We just pick them off and strew them pretty thickly in drills as we would peas, in good rich soil. If land is plentiful, put them far enough apart to cultivate with a horse. If you wish to have more on a small quantity of ground, put them only one foot apart. They will come right up and grow, and make a very pretty show in a garden right during the fall months. Any time in February or March, when the ground is not frozen, dig them, and set them in rich soil under your greenhouse benches. The sudden warmth will make them think spring has come, and they will grow to your heart's content. Those left in the field will be a month or two later. During the past spring we have sold wagonloads of them at 5 cts. for a bunch weighing 8 oz. Those forced in the greenhouse brought 5 cts. for a bunch weighing a third of a pound. The foreman of our sawroom has a little greenhouse of his own construction. He wanted it to play with, just as I use ours to play with. The first week in July he informed me he was selling tomatoes. The tomatoes came from plants kept in his greenhouse, in pots, until they had blossoms and little tomatoes on. When the weather admitted they were transplanted into open ground, and I presume he gets as much as \$2.00 a bushel for all he has now to spare. To be sure, it will pay any one who will take the necessary pains and care.

A GOOD REPORT FROM THE BUSH LIMAS.

The bush lima beans you sold me seed of are looking finely—just covered with blossoms, and loaded with pods, not quite full yet.

Chapel Hill, N. C., July 7.

JULIA C. GRAVES.

TOBACCO COLUMN.

AN UNEXPECTED CONTRIBUTION TO THE WAR
AGAINST TOBACCO.

A. I. Root:—As a co-laborer in the endeavor to raise the moral standard of our race, I herewith inclose five dollars. The same I desire placed to the credit of your anti-tobacco account. I have watched with interest the responses that come to

your appeal to the people to cleanse themselves of the tobacco habit; and the number you have reached far exceeds any estimate I may have made. There is little probability that the calls upon you for "smokers" will exceed your willingness to supply; but should the demand at any time seem a tax, you might not call in vain upon the writer for a little assistance. I have the honor to be very truly your friend,

R. A. BURNETT.

Chicago, Ill., June 11.

Friend Burnett, may the Lord be praised for your kind donation—not because we need it, but because of the spirit it shows and the lesson it may teach. At present I hardly know what use to make of the \$5.00; but the Lord will unquestionably point out a way. I suppose, of course, I may have your letter for print. I want it because I feel sure it will help in the war against tobacco—the war that is to be fought, not by might nor by power, but by the influence of the Holy Spirit.

A WOMAN WHO HAS QUIT SMOKING.

Please send Mrs. Nancy Sheets a smoker. She has quit smoking her pipe. She has started in the bee-business, and would rather do without the pipe than without a smoker. If she ever commences smoking again I will pay for smoker myself.

Fredonia, Kan.

JOHN DARST.

Many thanks, friend D.; and please tell our friend Mrs. Sheets that Uncle Amos bids her God-speed in breaking away from the tobacco habit.

A YOUNG BEE-KEEPER TAKES THE TOBACCO PLEDGE.

I am now 20 years old, and have been using tobacco four years; but after reading the Tobacco Column I have decided not to use it any more. I have six colonies of bees in frame hives, and should like to have a smoker; and if you will send me one I will pay for it if I ever use tobacco again.

Goodman, Miss., May 20.

W. R. TATE.

AN UNCLE AND NEPHEW UNITE IN TAKING THE PLEDGE.

My uncle and I have been using tobacco for about three months. He has quit it, and about an hour ago I chewed my last chew; and if you deem it proper, just send us a smoker. If either of us use it in any way again we will pay you for the smoker.

Stony Point, Tenn.

A. D. DERRICK.

PAYS FOR THE SMOKER AFTER COMMENCING THE WEED, BUT HAS QUIT AGAIN.

I send you 70 cents to pay for the smoker that you sent me several years ago for stopping the use of tobacco. I have broken my promise; but I think more of my word than I do of the money, so I remit to you the amount promised. For nearly a year I have done without it, and now have no desire for it. I am very glad that, when we fail in our promises, we can begin again. I enjoy reading your Home talks in GLEANINGS, and hope you will continue in your good work.

Manchester, N. Y., May 15.

E. G. HOWLAND.

FATHER AND SON TAKING THE PLEDGE TOGETHER.

My little son and I have been smoking only since we have been keeping bees, as we thought the smoke would quell them. Since we have been reading GLEANINGS, only a stray copy now and then, I tell him we must lay aside our tobacco, as it may

seat a habit hard to leave off. For encouragement to him, send him a smoker; and we hereby bind ourselves from this date not to use tobacco in any way, shape, or form. If he or I ever go back to the habit, we will send you the price in full for the smoker.

L. B. WHITTLE.

JAMES B. WHITTLE.

Cloud's Creek, S. C., Feb. 25.

OUR HOMES.

Enter not into the path of the wicked, and go not in the way of evil men.—PROV. 4: 14.

I HAVE of late said so much in regard to temptation, and the importance of avoiding at the outset, any thing that might lead us into danger and sin, that I sometimes think I ought to be ashamed of myself; and here I am taking up the old subject again. It may be that it is *Satan* who whispers to me now and then that a man over fifty years old, and one who has been a professing Christian for twenty years, ought to be ashamed of himself—or, rather, ought to be ashamed of *acknowledging* that he is still tempted to do evil. Perhaps the season of the year has something to do with bringing to my mind the text I have quoted. During the month of July, most of us think more or less about some sort of recreation. Our schools are closed; many of our places of business are shut down during the heated term; some of the Sunday-schools, I am sorry to say, take a vacation; and in the absence of the pastors, church services are sometimes stopped for a time. All of us think of taking things a little easier. It is true, that those who work in the harvest-field oftentimes undergo the *severest* labor of the year; but after harvesting is done, even they usually think about picnics, excursions, Chautauqua, Lakeside, the seashore, watering places, etc. These things are all right and proper in their place. But there is something sad in the fact that at such seasons so many are ready to forget their vows to God, and vows made before their fellow-men, and stray away into old sins, and get back into old temptations. Many who have been intemperate find it very hard to get past the Fourth of July. Now, to all such I would recommend the little text I have quoted: "Enter not into the *path* of the wicked." Do not even go in places they frequent. If there is any place where bad men are wont to congregate, go not there. It is sometimes urged that we should go to do them good, or go to keep down the evil. This may all be very well, if we go as missionaries, or go with that idea in view. But, beware of letting Satan deceive you. If you turn to the 4th chapter of Proverbs you will find a verse just after our text, which reads, "Avoid it, pass not by it, turn from it, pass away." If you do this, there is not very much danger. I know this by experience. But there is always danger if you *dally* with sin. Another verse, further on, reads: "For they sleep not, except they have done mischief." Many a boy, many a girl, would have been perfectly safe from temptation had they not

unwisely *chosen* dangerous places. There are streets in our great cities where it is said to be unwise for a woman or even a man, for that matter, to walk, unless it be on business. Once when staying over night in the city of New York I felt a great curiosity to just take a look at the dangerous localities. I hadn't any business there, as a matter of course; but I wanted to *see*, at least from the street, the things we have all heard so much about. Yes, I had a curiosity to see what was going on in such places in the night time. I decided that I would walk briskly, and pretend to be on urgent business, so that nobody would take any notice of me. But either I was not sharp enough, or else even a busy man is not secure from interruption. In a little time I was followed. I caught only a glimpse of the poor lost wretch who attempted to enter into conversation with me, but her voice still rings in my ear, and the hollow, mocking laugh that I heard behind me as I hurried away follows me still. Another verse reads: "They eat the bread of wickedness, and drink the wine of violence." But after the above verse comes one of such wondrous beauty, and so bright with hope, that I want to put it in right here, even if it is not in a line with my subject. It is this: "But the path of the just is as the shining light, which shineth more and more unto the perfect day."

I presume we all have this longing for something new and something different. During these July days we hunger for some sort of change. We want to lie off for a day or a week, or perhaps a month. We want to go somewhere. We want rest, and we want recreation. It is right that we should, too, dear friends, and I hope many of you who read these lines *are* having rest and recreation. Here in the factory we have been so busy for months past that no one has even spoken of a picnic or excursion or a holiday. Just now, however, we are glad to recompense these friends by telling them that any of them can take a vacation if they wish, providing, of course, too many do not go at once, and that they also make some arrangement for filling their post while absent. Our orders are all filled; however, we have quite a good many still coming and going daily. What shall we do for recreation? The children and even mamma almost always find a little fault with me because I always recommend some kind of *work*. For instance, I should say, "Have rest and recreation and fun in raising strawberries." Now, with a great many of you this would mean severe hard work. I am glad to note, however, that a great many of my readers look at it as I do—that is, where it is a change from their every-day toil. Why do I recommend these things? Well, because so many who start out to have a good time do not seem to have it, after all. It turns out like the words in Isaiah: "Wherefore do ye spend money for that which is not bread, and your labor for that which satisfieth not?" Perhaps some of us have had experience in that way. I wonder if I shall judge harshly of humanity when I suggest

that recreation and having a good time suggest to many something sinful. I hope it does not to you, dear reader, but I am afraid I shall have to confess that, a great many times when I feel out of sorts, and a general lack of interest in my every-day work, my thoughts are very apt to turn toward something sinful. A man who has been intemperate, when he thinks of a picnic or a hunt in the woods, or boating and fishing, instinctively turns his thoughts longingly toward some sort of stimulant to take along with the lunch. One whose besetting sin is gambling would take along a pack of cards. Perhaps neither would propose to do anything bad. One would say, "Oh! a little fun won't do any harm just at this time of year, when we are having a holiday." The other would suggest, "We will just play a little among ourselves, just for the fun of the thing, without any stakes." My friends, let me bid you read the 4th chapter of Proverbs. "Enter not into the path of the wicked, and go not into the way of evil men." I do not know where *your* besetting sin lies. I do not know just where you are weak, but it is pretty much the same. The only safe course is, "Avoid it, pass not by it; turn from it, and pass away." I have told you about our horse Meg that used to run away. Although it was years ago, everybody who handles her needs to be cautioned to keep a firm hold on the reins. Sometimes, after I have driven her for fifteen or twenty miles I think to myself, "Oh, well! she is too tired to run now. If the lines were thrown right down on the dashboard there would be no danger." Before long, however, I have been ready to change my mind. Even after she has been driven *twice* fifteen miles I have seen her start with as much strength and suddenness as if she were right fresh from the stable, or as if she had not been used for a week. And it is so with Satan and sin. Do not console yourself with the idea that you are too weak with hard work during these hot days to be in danger of evil suggestions. Do not delude yourself. Satan is on the alert, and is watching for just such opportunities. Physical weakness and exhaustion count as nothing when *Satan* has once got hold of the reins again. Before you know it, almost before you have time to say, "Lord, help," you are swept off your feet out into the stream. Keep clear of dangerous paths. Choose wisdom and not folly. Never mind if you are tired and weary. Better wear out your shoes—yes, better a thousand times wear out *yourself*, than to get back into the hands of the evil one.

Now, notwithstanding I do not take up many of the ordinary amusements and recreations, I am still one of the greatest fellows for something new and something exciting that you ever knew. If I can not have some variety in the routine of every day's duties, I am not satisfied. Nay, further: I am hardly satisfied unless I can explore some *unexplored* region, more or less, every day. As a matter of course, every little while my explorations run into Satan's domain. How can I tell? There is no difficulty, dear friends, in deciding. The

one who is constantly seeking wisdom and guidance from *on high* will always be told very quickly when he is sinning against God or against his fellow-men. Now, when my enjoyments are of that nature that make me feel even just a *little* bit guilty, this sense of guilt constantly mars the enjoyment. The little prayer I have told you of, "Lord, help," begins to ring with its warning note. When my pleasures and enjoyments are of such nature that I can freely ask God's blessing on them, it gives a new and pure sense that I can hardly explain. But you know how it is yourself. When I am out among my strawberry-plants, say at the close of the day, between sundown and dark, I often say to myself, "Thank God! thank God! There is nothing wrong or wicked in being happy with these gifts that come directly from his hand." And this reminds me of a single sentence in a letter just received from friend Terry:

Those Haverlands yielded at the rate of more than \$1000 per acre.

T. B. TERRY.

Hudson, O., July 8.

Now, it is not the *money* that friend Terry is after, that makes him rejoice at this result, but it is because of the possibilities that he sees along the line where he is making discoveries. It is because he sees plainer than ever before that he has made no mistake, and that his convictions were right.

There is another line of temptations that beset and trouble and worry a great many of the friends who come to me, and it may get in and mar the enjoyment of any kind of recreation—yes, even strawberry-raising. The temptation I allude to is the one of *unwise expenditures*, or *extravagance*, if I may so term it. Some of you who read these pages may say, "Well, I am going to have my recreation as Bro. Root does, in raising strawberries." He may commence by buying a piece of ground he has no right to buy; or he may take time that belongs to his employers. He may purchase *manure* unwisely. He may finally order a *great lot* of strawberry-plants (of A. I. Root), when he could have got a *few* near home to much better advantage. If there is any class of sufferers that I feel sorry for from the bottom of my heart, it is those whom Satan tempts to pay out their money unwisely as fast as it gets into their fingers, and sometimes a little faster. Do not mar your happiness in this line, dear friends. My first experiment with strawberries, and the one I think I enjoyed the most, was in taking some old dried-up plants during a drouth in July, and giving them water until their dried-up runners revived and put out new leaves. I did most of the work between sundown and dark, so it cost little or nothing. Then I wheeled manure on a wheelbarrow from a place where it was doing no good, to make a mulch. With this start, and without buying any plants at all, I produced the finest crop of strawberries, I believe, I ever raised. Of course, I did not know what variety I had got hold of; but that did not matter very much then. Now, when you can use something for recreation and enjoyment that costs us nothing, and

does not encroach upon anybody else, you can truly rejoice. A little beginning can be made in almost all of these rural industries in just the way I have indicated; and when we are learning to love plants or domestic animals, and are led through them to look up in *wonder* and *joy* and *praise* to the great God above, we are in a measure *safe* from Satan's allurements.

I now want to refer to the text about the Holy Spirit, in my talk of June 15. I am still praying for the Holy Spirit according to the promises of Christ Jesus the Son of God; and something a little surprising in regard to this matter of temptation has come to me along this line. One who is praying for the Holy Spirit is not likely to fall into temptation; for the attitude of heart that would prompt one to pray for the Holy Spirit would be very sure to crowd out thoughts of evil. The trouble is, then, that we get into an attitude of heart where we do not *want* the Holy Spirit—where we rather excuse ourselves and turn to the pursuit of something else. In this attitude of heart we are in great danger of falling into Satan's hands. The gift of the Holy Spirit crowds out and keeps away every thing evil, and it is this that makes it the greatest of all God's gifts. We read in the first Psalm, "Blessed is the man that walketh not in the counsel of the ungodly." When we are busy with something good we are not likely to be led away by something that is evil. With the Holy Spirit in our hearts we shall be constantly prompted toward acts of kindness and acts of mercy, and these promptings should keep us so busy that we shall have no time and no taste or desire to join in with those whose works are evil. And since I have been praying for the Holy Spirit, my busy days seem to be my happy days. I greatly enjoy being what I have been mentally calling myself—a "connecting link." I do not mean the connecting link that Darwin sought for and did not find, but a connecting link in a helpful way. Were you ever out in a field with a plow or cultivator, and horse and whiffletree, but could not go on with your work because you lacked a simple connecting link? Sometimes a piece of harness is made to do duty in default of something better. A clevis, if it is on hand, makes a good connecting link; and I have often declared that I would have clevises of different sizes hung up in the tool-house, so that, when one gets lost or broken, an extra one might save time and vexation. Well, I have been happy in making myself a connecting link in the machinery of every-day life. Two men were drawing a heavy burden, during a hot July day. The burden was too heavy for them. I glanced out of the window and saw a man approaching them from an opposite direction, with a horse all harnessed, ready to hitch on to some vehicle. I remembered a whiffletree standing against a post in the tool-house. If the whiffletree could be on the spot when the horse passed the two men with their burden, the horse would do easily what they were doing with difficulty. If I should call a boy, he would not understand where the whiffletree was, and the

man with the horse would be gone. By going downstairs with a rush, and through the apiary on a run, I knew I could get the whiffletree at the appointed spot before the horse got out of hearing. Nobody was astonished to see me go downstairs as if the house was on fire, for I often do it. The bees did not sting me as I rushed among their hives, for very likely they have often seen me do it. The men looked their thanks, even if they did not say any thing, as old Charley walked off with the burden easily.

Now, in our busy place of business, by keeping my ears and eyes open, I can, a great many times a day, make myself a connecting link in just that way. I presume a great many of the friends think I just *happened* to be on hand with a whiffletree, or that I just *happen* to hear the whistle of the man who drives the wagon with the berries. But there was no "happen" about it. My ears have been sharpened, I hope and believe, under the influence of that little prayer for the gift of the Holy Spirit, and it has made me more wideawake, and keener to the needs and wants of those around me. I hope. And I hope, too, it has made me kinder and more forbearing. Now, please do not, any of you, say that I am telling these things because I want to boast of what I have done. I boast not of *myself*, but of the *Holy Spirit* that is promised as a free gift to all and every one of you. Some of you are wanting to know what you can do for Christ Jesus. Some of you want to know what you can do for your fellow-men; and some are wanting to know what they can do to earn a livelihood; and others, I hope, are wanting to know what they can do to keep themselves busy, that they may not want to go into the path of the wicked, as in our text to-day. Dear friends, that promised gift of the Holy Spirit will supply all these wants. But while you are praying for it, please remember that you *can not* "enter into the path of the wicked" nor "go in the way of evil men;" for if you do, *after* such a prayer, you would not be consistent and honest; therefore, as I have said, is *prayer* a safeguard. Now, when you go off for your summer vacation, or when you go to picnics or on an excursion, or take a holiday, and you want to have a good time and a happy time, pray first for that Holy Spirit I have been telling you about, and then enter *not* into the path of the wicked, and go *not* in the way of evil men.

The above was dictated late Saturday evening. It is now Monday morning. Monday always brings a burden of cares. It seems harder, because I have been out of the harness for a little while, and it takes a little time to get the harness adjusted and the burdens fairly shouldered. Now, please do not think I am complaining. The harness is a grand and glorious one; and when I am bearing the burdens for Christ's sake, I am not only proud of them, but *happy* that I may bear them. Almost in the outset I found a grand place for making myself a connecting link, as I have been telling you. The foreman of one of the rooms sent word

that he would prefer to resign his place rather than to have "so and so" work there any longer. "So and so" declared with equal positiveness that it was by my express orders that he should go to work Monday morning in that very room. Each one was full of complaints of the other. My first impulse was to dismiss all connected with the disturbance. It is now our dull season, and we could spare half a dozen, without minding it. But I said nothing to anybody, but took a turn in the open air, and prayed for that gift of the Holy Spirit which is promised. That Spirit told me at once that I should feel very badly if I dismissed these friends with their hearts full of jealousy, fault-finding, and evil. I thanked God that I had not acted upon the impulse of the moment. One of the parties is a professor of religion, and I had a big hold on that. As I plead with him and quoted texts, his string of complaints became shorter and feebler; and he finally admitted, with tears in his eyes, that it really was the lack of Christ's spirit that brought the present trouble. His comrades were not professors; but I reminded him that it is our duty and our privilege to lead them to Christ; and yet how far—oh, how very far away we were from it!

As I caught a glimpse of the bitterness in the hearts of all concerned, it seemed to me that it would need not only a long "connecting link," but one of *mighty* strength, to unite the two parties. But, dear reader, the love of Christ can bring together the bitterest enemies the world ever knew. It can bridge over chasms that have their outgrowth in years. Satan can be routed, and the love of Christ be implanted instead, oftentimes, if even only *one* of the parties is a professing Christian. Now, then, suppose I had hastily dismissed all who were quarreling. As a part of them proposed to dismiss themselves, all I should have had to do would be to assent. I can not tell you how glad I am that I did not assent. Had I done so, the feeling of bitterness would have extended to myself; and my chance of leading them to the Savior would have been passed by, perhaps for years to come. As it is, all feel kindly toward me, and I am sure that at least *one* of them will give me a hearty co-operation in any thing I propose, and, in fact, the little pleading I did for Christ Jesus has brought me nearer to that one than I have ever been before; and as I pen these words, dear reader, I rejoice and feel exceedingly happy to think of the new bond of friendship and love between myself and that one—to think of the *strong* connecting link for Christ Jesus, where there might have been only bitterness.

THE NEW WATER CURE.

SOMETHING FROM ONE OF OUR DOCTORS, AND ALSO A KIND WORD FROM THE OTHER SIDE.

BEFORE dismissing this matter, I wish to give a couple of letters selected from a large number on the subject. The first one is from one of our regular practicing physicians:

Mr. A. I. Root:—You give the doctors a punch in GLEANINGS of July 1st for being "perfectly silent on this great discovery" as you term it. Now, I think I speak the sentiment of a large majority of the medical profession when I deny the charge by saying we are not silent, but "speaking out in meeting" day and night, the world over, and because we do not parade our wares in public, and advertise in the popular journals and daily prints, and discuss "the Great Discovery," which is as old as Hippocrates, and has been used by physicians from that day down to the present, you must not conclude that we are *silent* and *disinterested* spectators, or afraid of diminished rations of "bread and butter," as Dr. Hall is pleased to insinuate, in case the "Great Discovery" comes into general use, and "doctoring" is carried on "without medicine." We report remedies and the general treatment of diseases, and special cases, to each other, through the medical journals, the only proper vehicles for such communications. "A little knowledge is dangerous;" and while you are reporting your "Great Discovery" to your 10,000 readers you should point out the pathological conditions to which it is applicable, as well as the great danger that would result from its improper use. All remedies are relative agents—relative to the pathological conditions existing—and all good remedies are dangerous if not rightly used; and this one which you extol so highly, and recommend so indiscriminately, caused the death of a lady in this city, in the convalescence of typhoid fever, although used under the direction of a skilled physician. Now, you seem to think our keeping still is at least suspicious, and would like us to appear before the public and prove our innocence to the entire satisfaction of all your readers. You have asked the question yourself, and we patiently await the verdict. Our evidence is before the world, and we submit the case without argument.

J. A. SCUDDER, M. D.

Washington, Ind., July 7.

Very good, Dr. S. I hardly need say that I believe you are right in nearly every particular. Any thing that comes up, having a tendency to spoil our faith in the family physician, tends toward danger and evil. I have, however, received so many very kind letters from those who have very great faith in Dr. Hall's remedy, that I thought best to submit one of these also:

Mr. Root:—I noticed your editorial in GLEANINGS for May 15, and I wish to say I think you have done a great wrong to perhaps hundreds of people. I will explain. If I had read your editorial before I had purchased the secret I should never have bought it, for the reason I have such confidence in your criticisms; but I have practiced the treatment, and it has saved me a great deal of sickness and money, and I would not sell it again for \$1000. You say it is well known to our doctors. If that statement is true, why did they not prescribe the same for me? I have had several doctors treat me during the last 20 years for what they called "inaction of the lower bowel," and every little while I would get bilious and have a sick spell; and the nearest anybody ever came to prescribing that treatment was one doctor who told me to take one of those five-cent glass syringes and inject a gill of cold water. Now, can you not see that there are others to whom the treatment would be just as beneficial as

it is to me, and that your editorial will for ever deprive them of that which, if they had, they would not part with for any amount of money? therefore you have done them a great wrong, saying nothing about whether you wrong Mr. Hall or not. You say Dr. Hall claims it was revealed to him by the Almighty. I can not find any such statement in the pamphlet, in the light that your editorial gives it, any more than you claimed that God revealed that spring to you there by the windmill; and I believe both of you in your finding the knowledge of the spring and the secret.

Another thing, Mr. Hall does not claim that the injection was a discovery, but that the retaining of water after having had a thorough evacuation was, and I most heartily agree with him. And even admitting that it is an old remedy, is he not a benefactor by bringing it before the public? and is it not worth \$4.00 to any family? Do you not bear witness that it is "valuable"? and would you have known it if it had not been sold for \$4.00?

And now, Bro. Root, just one thing more: Two years ago this village had an epidemic of meningitis. Four of my children had it. *Two died*, and I believe before God that this treatment would have saved my boy's life. If you are acquainted with the disease, you know the first and main thing is to get a movement of the bowels; and as they are taken with vomiting, it is impossible to give physic. Could I not with this secret have done better? In closing I will say my heart is full because I think you have done wrong, and a great wrong, to your fellow-men. I am not selling, nor interested in the sale of it, nor in Mr. Hall. ADOLPHUS NEWTON.

Norwich, N. Y., June 6.

EDITORIAL.

But the fruit of the Spirit is love, joy, peace, longsuffering, goodness, faith, meekness, temperance; against such there is no law.—GAL. 5: 22, 23.

UNTIL next issue we will pay 5c each for the April 1 and May 1, 1890, numbers of GLEANINGS.

DECLINE OF BEESWAX AND FOUNDATION.

SINCE the rush of the season is over, the price of beeswax has eased a little, and we are able to cancel the last raise of 3c. per lb. Price of beeswax will be same as on the cover of last issue. Heavy brood fdn. 45c. per lb., and at same rate for other grades.

ASTONISHED BEES.

WE clip the following from the *Country Gentleman*:

Among other things struck by lightning this summer was a bee-tree near Cuesta, Ga.; bees and honey were scattered in every direction, but the bees couldn't hit back.

ANOTHER WARNING NOTE.

IN spite of our caution on page 470, we have received two or three more samples of foul brood by mail and one large one by express. The one last mentioned came in the absence of the writer (E. R. R.), and the receiving clerk, not supposing the box contained anything so dangerous, of course opened it. It being very hot weather, some of the honey had melted and run through, when my attention was called to it after my arrival home. I took it down in front of the boiler-arches,

carefully examined it, and found it was the genuine foul brood. Fortunately it came during a great yield of nectar, and of course there were no robbers. Had there been, we might have had a repetition of our foul-brood troubles. I tell you, friends, it is a most serious matter. Sending foul brood by mail or by express can not help placing in jeopardy any apiary within whose immediate vicinity it may come. The instructions and description of foul brood, given in our ABC of Bee Culture and in Prof. Cook's last Bulletin, are so complete and full that our friends ought to be able to properly diagnose any case of the real trouble. Bro. Newman, in the *American Bee Journal*, has likewise informed his readers, and we hope the other bee-journals, if they have not already done so, will send forth a warning note. Our friend wished us to send it to Prof. Cook, after examining it. Instead of complying with these instructions I gave it a "hist" into the boiler-furnace. It is like sending dynamite or nitro-glycerine through the mails. While in the case of foul brood, human lives are not jeopardized, yet *human interests* are so most seriously.

Either our friend above is not a reader of a bee-journal, or else he reads them so carelessly that he overlooked the former warnings. If he had been a follower of our pages a year or so back, he could not have been mistaken as to what he had in his apiary.

Later.—After the above was in type I noticed that Bro. Jones, of the *Canadian Bee Journal*, thinks it necessary, for proper diagnosis, that samples of the infected brood be sent to the proper persons. With the clear and minute descriptions that have been given of the symptoms of the disease, I still think that a person of average intelligence could very easily diagnose his own cases.

HONEY AS FOOD.

How many times I think of Josh Billings' quaint speech—"What is the use of knowing so much, when so much that you know ain't so?" I am reminded of it just now in the confession I have to make. A short time ago I gave you my experience in using honey as food, and I was quite emphatic in saying that it gave me a headache when maple syrup would not. Well, a few days ago I took a notion to eat quite liberally of the new alfalfa honey, spoken of in last issue. Quite to my surprise I felt unusually well during the whole afternoon. Then I ate still more for supper, and good old dame Nature pronounced it tiptop and called for more. Since that I have been eating quite liberally, with the best results; and when I found that alfalfa honey agreed with me perfectly, I substituted good well-ripened basswood honey (extracted, of course), with the same results. Therefore I wish to ask my good friend Cook to let me take back at least a good deal of what I said about honey being unwholesome. In the latter experiments I ate it with good nice bread and good nice butter; and I believe that, in my former experiments, at least several times I ate honey with hot biscuit or something of that sort, and I am afraid I charged the honey with something that belonged to the hot cakes that went with it. Perhaps you think I am taking considerable space for a small matter; but it is quite a serious matter when the editor of a bee-journal says that honey is not good food, even if he does mean to say, *so far as his personal experience goes*. Very likely a kind of food that would at

one time induce nature to protest, might at some other time prove to be exactly the thing she wants and calls for. Shall we not all be slow in coming to positive conclusions?

SPECIAL NOTICES.

OF INTEREST TO AUSTRALIAN READERS.

Goods shipped to Australia have had the option of three routes: Across the continent to San Francisco, thence by steamer, which is the quickest and most expensive route; by steamer via New York and England, and via sailing vessel from New York direct, the last being the cheapest and also requiring the longest time, usually about five months from New York. We have just received advice of a steamer, "Prodans," to sail a month hence direct for Adelaide, Melbourne, and Sidney, and expected to make the trip one way in fifty days. We are assured that the rate will be low, less than half the cost by steamer via England, and we sincerely hope, for the benefit of our Australian correspondents, that the venture may prove successful and be continued.

EGYPTIAN ONION-SETS, CROP OF 1890, ETC.

Ours are now ready to gather, and, like the strawberry-plants, the quicker you get them into the ground the better growth they will make before winter time. Price 10 cts. per quart, or 75 cts. per peck. If wanted by mail, add 10 cts. per quart extra. We shall not be ready to send out strawberry-plants before about the first of August. During the coming fall we shall offer for sale only four kinds—Jessie, Bubach, Haverland, and Gandy. We drop the Sharpless for the Jessie, and the Jersey Queen for the Gandy. We mention this, as others may wish to know our preference among all the new sorts that are offered. The Gandy is the one, it will be remembered, that has been advertised as the "first season's" strawberry. We shall also test quite considerably the strawberry known as Michael's Early, also sometimes called Osceola. This seems to be about the best early strawberry.

MOTTOES AND LETTERS IN COMB.

You can add much to the attractiveness of your fair exhibit by having the bees work out in white comb, letters forming your name or some motto. It will be the means of attracting many more eyes than would otherwise notice your display. We are again prepared to furnish letters as we did a year ago, and that you may know fully what we did agree to furnish we copy from last year's notice:

We have a full set of pattern letters to work from, and they are of such a size that three will fill an 8-section wide frame, the openings forming the letters being about 7½ in. high and 5 in. wide. M and W, of course, are wider, and I narrower. The letters are of the following pattern:

FAIR, 1890.

The price will be 10 cts. per letter or figure. With thin foundation inserted, 15 cts. per letter or figure. In ordering, if you will write the letters in the order you want them, we can make 3 letters in one piece, just right to slip into a wide frame. Or if you don't happen to have a wide frame, simply tack a bar on top, to suspend it from, and hang it in the hive without a frame around it. The 4 figures, 1890, will go in a frame. To make the letters, we simply tack two ¾-inch boards together, mark the letter, and jig it out on a scroll-saw. To put in the foundation, separate the boards, lay a sheet between, and tack them together again. We make the letters large, because the bees will work in them more readily, and they are much more conspicuous when filled.

PREMIUM OFFER.

To those intending to make an exhibit, and who will agree to distribute judiciously the circulars we will send, we will furnish free one letter or figure for each dollar's worth of goods ordered, if the order amounts to \$4.00 or more. If foundation is inserted in each letter, we will furnish 2 letters for every \$4.00 worth of goods ordered.

Will tell you more about our fair offers in next issue.

